JUL 21 1926

Medical Lib

The

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ISSUED WEEKLY] [COPYRIGHT] [REGISTERED AS A NEWSPAPER

ROYAL AIR FORCE MEDICAL SERVICE.

Flight Lieutenant A. E. Barr-Sim is promoted to the rank of Squadron Leader.

Flight Lieutenants (Honorary Squadron Leader) C. A. Meaden to No. 29 Squadron, Duxford; R. L. C. Fisher to No. 32 Squadron, Kenley.

Flying Officer H. W. Corner is promoted to the rank of Flight Lieutenant.

Flying Officers E. J. Jenkins to Station Headquarters, Bircham Newton; M. J. Marren to No. 3 Squadron, Upavon; S. F. Heatley to School of Technical Training (Men), Manston; P. H. Perkins to R.A.F. Depot, Uxbridge.

REGULAR ARMY RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel H. M. Nicholls, having attained the age limit of liability to recall, ceases to belong to the Reserve of Officers.

INDIAN MEDICAL SERVICE.

Colonel Francis H. G. Hutchinson, C.I.E., to be Major-General, vice Major-General Thomas Henry Symons, C.S.I., O.B.E.

Lieut.-Colonel C. B. McConaghy, an Agency Surgeon, on return from leave, is posted as Legation Surgeon, Nepal, and *ex officio* Assistant to the British Envoy at the Court of Nepal.

Captains to be Majors: William Peat Hogg, M.C., V. R. Mirajkar, M. M. Khan.

Captain T. A. Doran is appointed to officiate as Executive Officer, Kirkee Cantonment, in addition to his ordinary duties, vice Captain F. R. Bailey, granted privilege leave.

SUPPLEMENTARY RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captain S. P. Wilson, from General List, T.A., Manchester University Contingent, Sen. Div. O.T.C., to be Lieutenant.

Lieutenants to be Captains: W. G. Burns and A. R. Balmain.

VACANCIES.

BEDFORD COUNTY HOSPITAL.—Assistant House-Surgeon (unmarried). Salary £130 per annum.

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HUDDERSFIELD ROYAL INFIRMARY.—Two Junior House-Surgeons. Salary £150 per annum.

IPSWICH: COUNTY BOROUGH OF IPSWICH.—Assistant Medical Officer of Health and Assistant School Medical Officer (woman). Salary £600 per annum.

KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.—Assistant Resident Medical Officer at the South Wales Sanatorium, Talgarth. Salary £200 per annum.

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WILLESDEN GENERAL HOSPITAL, Harlesden Road, N.W.10.—Casualty Officer (non-resident).

This list of vacancies is compiled from our advertisement columns, where full particulars will be found. To ensure notice in this column advertisements must be received not later than the first post on Tuesday morning.

APPOINTMENTS.

GAWNE, E. S., M.R.C.S., L.R.C.P.Lond., D.P.H., D.M.R.E.Liverp., Medical Superintendent, Townley's Hospital, Bolton.

ROBINSON, James S., M.B., B.Ch.Dub., F.R.C.S.Edin., Honorary Surgeon and Orthopaedic Surgeon, Cheltenham General and Eye Hospital.

CHARING CROSS HOSPITAL.—*House-Surgeon:* R. A. Fitzsimons, B.Sc.Lond., M.R.C.S., L.R.C.P. *House-Physician:* J. Powell Evans, M.R.C.S., L.R.C.P.

CERTIFYING FACTORY SURGEONS.—J. S. Hall, M.B., Ch.B.Glas., D.P.H.Camb., for the Roth-say District, co. Bute; C. E. Ligertwood, M.B., Ch.B.Vict., for the Wiveliscombe District, co. Somerset.

DIARY OF SOCIETIES AND LECTURES.

VICTOR HORSLEY MEMORIAL LECTURE by Mr. Wilfred Trotter, M.S., F.R.C.S.: The Insulation of the Nervous System. British Medical Association House, Tavistock Square, W.C.1, Fri., 5 p.m.

POST-GRADUATE COURSES AND LECTURES.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole Street, W.1.—*Special Demonstrations.* At Royal Waterloo Hospital in Clinical Surgery: Mon., 2.30 p.m. At Royal Eye Hospital, Southwark: Thurs., 3 p.m. *Hospital for Diseases of the Skin*, Blackfriars, S.E.: Afternoon Course in Dermatology, Tues., 2.30.

CANCER HOSPITAL, Fulham Road, S.W.3.—Fri., 4.30 p.m., Cachexia of Malignant Disease and its Treatment.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn Road, W.C.—Fri., 3 p.m., Indications for the Radical Mastoid Operation.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.15.—Mon., 10 a.m., Surgical; 10.30 a.m., Gynaecological and Throat, Nose, and Ear Operations, 2 p.m., Medical, Surgical, Gynaecological Clinics, Operations; 6.30 p.m., Venereal Department. Tues., 2 p.m., Medical, Surgical, Throat, Nose, and Ear Clinics, Operations; 3 p.m., Demonstration of Illustrative Cases of Mental Disease at the Colney Hatch Mental Hospital, New Southgate, N.11. Wed., 10.30 a.m., Operations; 2 p.m., Medical and Eye Clinics; 3 p.m., Pathological Demonstration of Tumours of the Breast; 5.30 p.m., Venereal Department. Thurs., 10.30 a.m., Dental; 2 p.m., Medical, Surgical, and Throat, Nose, and Ear Clinics, Operations (Surgical and Gynaecological). Fri., 10.30 a.m., Eye Operations; 2 p.m., Surgical, Medical, and Children's Clinics, Operations; 6.30 p.m., Venereal.

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION.—At Western Infirmary: Tues. and Thurs., 3 p.m., Clinical Gynaecology; Mon., 9.15 a.m., and Tues., 2.30 p.m., Dermatology. At Royal Hospital for Sick Children: Daily (except Sat.), Medical Diseases of Children.

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Diary of the Association.

JULY.

6 Tues. City Division: Metropolitan Hospital, 9.30 p.m.
Coventry Division: Coventry and Warwickshire Hospital, 8.30 p.m.

7 Wed. Liverpool Division: Liverpool Medical Institution, 4 p.m.
Norfolk Branch: Annual Meeting, Norfolk and Norwich Hospital. Mr. A. W. Bourne on the Scope of Caesarean Section, 3.30 p.m.
Winchester Division: George Hotel, 3 p.m. B.M.A. Lecture by Dr. J. D. Barris on the Diagnosis and Treatment of Placenta Praevia, 3.30 p.m.

8 Thurs. Cambridge and Huntingdon Branch: Annual Meeting, 1 p.m. Lunch, 1.30.

9 Fri. Oxford and Reading Branch: Annual Meeting, Royal Berkshire Hospital, Reading. Discussion on Exophthalmic Goitre, 3.15 p.m. Branch Council, 2.45.
Sheffield Division: Church House, St. James's Street, 8.30 p.m.

10 Sat. East York and North Lincoln Branch: Annual Meeting, Powolny's Banqueting Rooms, Hull, 1 p.m.; luncheon, 1.30.

16 Fri. Annual Representative Meeting, Nottingham, 10 a.m.

17 Sat. A.R.M.

19 Mon. Council Meeting (Nottingham).
A.R.M.

20 Tues. A.R.M. Annual General Meeting.

21 Wed. Council Meeting.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcement of Births, Marriages, and Deaths is 9s., which sum should be forwarded with the notice not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

BIRTHS.

GARRATT.—On June 26th, at Myrtle House, Dunstable Road, Luton, to Winefride Mary, wife of Frank Garratt, M.R.C.S., L.R.C.P., a son.

MENON.—At St. Winifred's, Church Street, Edmonton, N.9, on June 19th, 1926, the wife of M. P. Kesava Menon, M.B., a son—Asoka.

POSTON.—On June 27th, at Mrs. McCubbin's Nursing Home, Withington, Manchester, to Margaret (*née* Macmillan), M.B., the wife of Richard T. Poston, M.D., Thorncliff, Failsworth, Manchester, a son.

MARRIAGE.

PANTON—HEATH.—On June 24th, at St. Mary's Church, Ashton-on-Mersey, by the Rev. R. Main, assisted by the Rev. D. E. Sturt, John Allison Panton, M.D., Ch.M., F.R.C.S.Eng. and Edin., only son of the late Dr. J. E. Panton, and Mrs. W. A. Bridson of Bolton, to Kathleen Amy, only daughter of Mr. and Mrs. Robert Heath, of Vernon Lodge, Brooklands, Cheshire.

DEATHS.

CROWTHER.—On June 11th, at his residence, Marloes, Russell Road, Lee-on-Solent, John Woodward Crowther, M.R.C.S., L.S.A.

MACLAY.—At Bamburgh, suddenly, on June 26th, Neil Maclay, M.B., C.M., of 2, Fenham Terrace, Newcastle-on-Tyne, aged 53 years, dearly beloved husband of Mary Maclay.

A British Medical Association Lecture

ON

ANGINA MINOR.

DELIVERED AT HASTINGS, JUNE 1ST, 1926,

BY

JOHN HAY, D.L., M.D., F.R.C.P.LOND.,

PROFESSOR OF MEDICINE, LIVERPOOL UNIVERSITY; SENIOR PHYSICIAN AND PHYSICIAN IN CHARGE OF HEART DEPARTMENT, LIVERPOOL ROYAL INFIRMARY.

ANGINA MINOR is a condition of some practical importance, and I trust that its consideration will help to crystallize our ideas; for there is still, in spite of much writing and talking, a certain haziness as to the significance of some of the pains and discomforts located in the precordial and substernal regions.

Up to December 31st, 1925, I have careful notes of 472 patients suffering from angina (309 up to July 31st, 1925, and 163 to December, 1925), mostly private patients; and it is on a careful scrutiny of these records that I base my remarks.*

One outstanding feature of the study of medicine to-day is the much greater attention paid to symptoms than to the physical signs of disease. In the latter part of the nineteenth century it was the physical signs of heart disease which occupied the minds of the profession, and the aim was to correlate the physical signs with the gross pathological changes present. This attitude dominated clinical investigation. Now with the swing of the pendulum the cross-examination of a patient is often considered even more important than the physical examination, and both are made with the object of obtaining a clear conception of the functioning power of the organ at fault, whether that organ be the heart, the kidneys, the pancreas, the liver, or any other viscus. For an organ may be gravely inadequate and yet present few, if any, objective signs of disease. It is here, in the assessing of the functioning power of the kidneys and pancreas, to give but two instances, that biochemistry has come into its own.

EARLY SYMPTOMS.

Symptoms are the earliest manifestations of disease more often than physical signs. There is some subjective deviation from the normal, such as discomfort, pain, exhaustion, or lassitude. The elucidation of the meaning of such deviations from the normal and their prognostic significance was the aim underlying all the work of the late Sir James Mackenzie. He, more than any other man, focused the attention of the world of medicine on the subjective aspect of disease. Of all subjective sensations pain is the most arresting, and is of the nature of a protective reflex. We are saved from destruction by the pain which we deplore. This is true even if we may have to admit that on occasions the anguish proves too great for the human mechanism, and becomes, in fact, the lethal factor precipitating the end which it is its function to avert. Peculiarly is this the case in patients suffering from angina pectoris, and it is essential that we should be familiar with the earliest manifestations of this condition or symptom complex, in order that our patients may have the benefit of a correct and early diagnosis, so that their lives may be ordered aright and their days lengthened.

"By angina pectoris I have in mind an arresting form of cardiac pain, substernal rather than submammary, in which the patient is conscious of a sense of oppression, or constriction, which may reach a high grade of intensity, even a condition of intolerable anguish. This pain has certain well recognized lines of radiation and is often induced by effort or emotion. There are in addition characteristic associated symptoms not invariably present—notably the sense of impending death, and indescribable anguish of mind accompanied by varying vasomotor disorders, such as cold sweats and deathly pallor." (Bradshaw Lecture, BRITISH MEDICAL JOURNAL, November 24th, 1923.)

With few exceptions, the full-blown stark anginal seizure cannot fail of recognition. It is otherwise with the earlier manifestations when such are present, and it is these less obtrusive indications which I wish to discuss—symptoms which are often not recognized as anginal in nature, and in consequence their ominous significance is overlooked.

In 1905 Sir James Goodhart, in the Cavendish Lecture, said, "Angina is common among us if we are on the look-out for the milder forms," and with this opinion I entirely agree. Angina minor has been labelled the "petit mal" of angina, and Sir James Goodhart referred to it as "larval." Both terms indicate that there is an essential relationship between the mild and the grave forms. It is merely a question of degree, for both are true angina.

Minor angina has also been called "fractional," because the patient may only manifest "one, or at any rate only a fraction, of the essential characteristics of the major anginas; that is, it may lack some of those characteristics always associated in our minds, and in those of the general public, with angina."

Minor angina may be, and often is, a premonitory symptom, but one full of significance to the understanding clinician. Most patients who suffer from major angina will, when carefully questioned, give a history indicating that for some years previous to the first major attack there were larval or minor manifestations, anginal in nature.

Again, both major and minor may alternate irregularly in the same patient, or the minor may come as an aftermath or echo of a previous major attack. In such a case, the diagnosis being then beyond question, an opportunity is given of studying the more elusive symptomatology of the milder disease fortified by the knowledge of its real significance.

CAUSE AND CHARACTER OF THE SYMPTOMS.

In angina minor, as in angina major, the symptoms result from cardio-vascular inadequacy, for the heart is in difficulties. Of these symptoms the commonest is substernal discomfort or pain on exertion or exposure to cold. This varies in degree and also in character. It is described by the patient as "a sense of oppression," "tightness," "constriction," a "feeling of weight," sometimes merely as "emptiness."

The site of the sensation is substernal, often in the middle or upper third, but it may be most marked at the lower third of the sternum, and sometimes even in the epigastrium, in "the pit of the stomach." This peculiar feeling is most commonly referred to by the patient as "indigestion," and not seldom he has been treated as a "dyspeptic" for years before the nature of the discomfort is revealed by an attack of angina major. These patients not uncommonly develop the habit of air swallowing, and an attack of angina minor simulating indigestion is accompanied by repeated attempts to "bring up the wind." When a sufficiency has been swallowed it is belched up, with undoubted relief to the patient. Such a sequence confirms the patient, and at times even his doctor, in the view that flatulence is the correct interpretation of the symptoms. And this view is still further corroborated by the fact that any exercise following immediately upon a meal—more particularly breakfast—is extremely likely to precipitate an attack.

The pains of angina, major or minor, are neither stabbing nor intermittent; they are continuous and persistent and have a crescendo and diminuendo quality, increasing in intensity if the effort which induced them is continued, and tending to cease when the patient rests.

The statement that anginal pain is an indication of myocardial exhaustion or evidence of myocardial failure seems to me to require modification, for cardiac failure may advance to an extreme degree without anginal pain, and definite anginal pain will sometimes disappear as cardiac failure becomes more pronounced.

The first manifestation of cardiac inadequacy may be pain, followed by dyspnoea if the effort is continued; yet at a later date in the same patient dyspnoea is the earliest sign of cardiac embarrassment, pain only manifesting itself if the patient persists in the effort. This may, of course, be due partly to variations in the threshold of pain, but I do not believe that that is the full explanation.

* I gladly acknowledge the great courtesy of the medical men in charge of these patients, a courtesy which has enabled me to keep in touch with the after-histories.

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CASE VII.

A heavily built, florid man, aged 60, first noticed slight substernal pain six years ago at the age of 54. It was mid-sternal and was brought on by walking, especially if the day was cold. Although a medical man he did not attach any importance to this suggestive symptom until 1924—that is, two years ago. Then the pain became more severe and for the first time extended into both arms and forearms.

In November, 1925, he suffered from a frank agonizing attack of anginal pain which lasted some hours and mainly affected the lower third of the sternum.

On examining him, shortly after his attack, there were no objective signs of disease, except slight enlargement of the heart which extended 4½ inches to the left of the mid-line. The sounds were normal and the blood pressure 140/90 mm. Hg. Heart rate 72, regular. There was little, if any, dyspnoea on effort. The attacks were relieved at once by rest or a draught of whisky.

This patient died in a major attack in February of this year. Minor angina was present for four years before the true significance of the symptoms became apparent.

CLASSIFICATION.

Following Sir James Mackenzie, I think the most satisfactory classification is that into two groups; (1) anginal pain due to some essential disease of the cardio-vascular system, which he has termed primary angina; and (2) the second group in which all evidence of such cardio-vascular disease is absent, but where there is some factor outside the circulation which has caused a lowering of the threshold to pain, or which has depreciated the efficiency of the myocardium. The neurasthenic group, I think, might be viewed as belonging to the secondary anginas.

The chief pathological changes in the primary anginas are diseases of the myocardium, with or without frank coronary narrowing; arterio-sclerosis, with or without high blood pressure; and lastly, valvular disease, more particularly of the aortic orifice, often associated with aortitis. In this group the myocardium is frankly handicapped, and it is clear that, with the exception of the syphilitic cases and those with high blood pressure, treatment cannot be expected to produce much change in the pathological condition, which is progressive in character.

In the secondary group of anginas the possible adverse factors are numerous, including subinfections or other causes of toxaemia. The nervous instability of the climacteric is associated with the lowering of the threshold to pain. Prolonged worry, anxiety, overwork, or any factor causing neurasthenia, may bring about a similar sensitiveness to painful stimuli.

It is well to remember that in a patient with definite cardio-vascular disease correctly classed as primary angina there may be present in addition conditions which would in themselves cause secondary angina, and in prognosis such possibilities must be carefully reviewed.

INVESTIGATION OF THE PATIENT.

After careful cross-examination of the patient in regard to the pain, and after having decided that it is cardiac in type and entitled to the designation of angina minor, he must then be investigated in order to determine the presence or absence of cardio-vascular disease.

The whole cardio-vascular system must be passed under review in order to determine first whether a diagnosis of primary angina is justifiable, and the extent of the damage. Any enlargement of the left ventricle is significant. This is most marked in patients with unduly high blood pressures, although it is found also in those suffering from free aortic regurgitation, and again sometimes in the absence both of raised blood pressure and aortic regurgitation. The fair inference in the latter case is that there is depreciation of the myocardium, probably due to coronary disease.

When there is valvular disease it is practically always the aortic orifice that is affected. In an analysis of 309 cases of angina pectoris made in 1923, only 35 showed disease of the valves, and, with one exception, the aortic valves were damaged. There was definite aortic regurgitation in 26, and some degree of aortic obstruction in 10 patients. Only one suffered from frank uncomplicated mitral stenosis. If there is an aortic leak it is often slight and the patient does not present the typical clinical picture of free regurgitation. The symptoms in such patients are not those of valvular disease with cardiac failure, they are the symptoms of angina, and not to be distinguished from the symptoms found in those other anginal patients in whom the aortic valves are competent.

Arterio-sclerosis is a common feature, as is to be expected when the age incidence of angina is remembered, and the condition of the arteries should be noted, especially those of the retina; and when possible the aorta should be *x*-rayed.

It is important to note the height of the blood pressure. It is unduly high in about half the cases. In 40 per cent. I have found it at or over 180 mm. Hg, and some amelioration of the symptoms is to be expected when the hypertension is modified. A marked rise in the diastolic pressure is of especial significance. Any drastic reduction of a raised blood pressure is, however, unwise in the interests of the patient, even if such a reduction can be brought about and maintained.

It is rare to find any change in the fundamental rhythm of the heart. Premature beats are not uncommon. Auricular fibrillation or the disorderly rhythm when it occurs may diminish the intensity of the pain, or even abolish it, but this is not invariably the case. In the following patient, on the contrary, the advent of fibrillation was accompanied by an increase in the liability to pain.

CASE VIII.

A man, aged 71, complained of gripping pain in the chest, brought on by walking. He had first noticed it five weeks before consulting me in January, 1923. It extended from the second rib to the xiphisternum and out as far as the nipples. On one occasion it was accompanied by "rheumatic pain" in the front of the left upper arm from the shoulder to the elbow. The pain came on four or five times a day; it was always induced by effort, and there was no dyspnoea. The heart was normal in size and free from valvular disease. The blood pressure was 140 mm. Hg, systolic. The rhythm was regular with an occasional premature beat.

He did well under treatment until May, 1925, and then the pain recurred and was more easily induced than in 1923. It also spread down to the finger-tips. In July, 1925, the only difference to be found on physical examination was that the auricles were fibrillating, and that the ventricular rate had increased to 120 per minute.

In this man the appearance of fibrillation was accompanied by an accentuation of the pain and not, as is more commonly the case, by an amelioration of the symptoms. He died in November, 1925, in a typical attack of agonizing angina.

If space permitted I could quote other similar cases, but these will suffice.

In the examination it is of importance to determine the factors which induce the pain, more particularly the nature and severity of the effort—that is, to estimate the amount of cardiac reserve; not only the cardiac response to effort should be noted, but the constancy of that response. It is satisfactory to find in any patient that there are days when he can do with ease that which on another day causes pain, for such patients prove more amenable to treatment.

There is something sinister about an anginal pain which invariably appears at the same fixed point on ascending an incline—at the same lamp-post, so to speak—and yet it is even more ominous when there is a steady diminution of the distance that can be walked without pain or discomfort.

When there are apparently no clear evidences of cardio-vascular disease, a careful survey should be made of the patient to discover, if possible, anything which may be lowering the threshold to pain. First, any toxic cause, such as a grumbling appendix, oral sepsis, sinus disease, or some pulmonary, renal, or alimentary disorder; further, worry, anxiety, overwork, or insufficient sleep, are quite likely factors. When some such cause is responsible for lowering the threshold to pain, it persists between the attacks of pain, and in consequence the patient is not normal even when quite free from angina. He is found to be toxic, or depressed and irritable, and shows the usual indications of nervous exhaustion.

When possible, as a final feature in the examination, it is well worth while to take an electro-cardiogram. This may reveal evidence of myocardial damage which might otherwise escape recognition. I will refer later to its value in prognosis.

DIAGNOSIS.

In the absence of syphilis or valvular disease of the heart, primary angina is rare under the age of 45, and it is

The causes which induce anginal pain have this characteristic—they are such as to bring about a rapid strain on the arterial side of the circulation and especially on the left ventricle. The two common exciting factors are effort and exposure to cold. In a large proportion of anginal patients there is either a lesion of the coronary arteries or persistent hyperpiesis; in the first, the supply of blood to the myocardium ceases to be adequate when the heart is called upon for an increased output; in the second, the left ventricle and the aorta are carrying the heavy load of a raised blood pressure.

Effort and exposure to cold, and at times excitement, result in a sudden strain, and the response to this strain is manifested in terms of pain. After a short rest and a more gradual resumption of the effort the myocardium sometimes accommodates itself to the altered conditions, and may even tolerate the effort with comfort. It is, in fact, a matter of readjustment.

During an attack of angina major, in addition to the terrible crushing agony substernal in site there are accompanying pains or unpleasant sensations which may be felt in the back between the scapulae, in the shoulders, arms, neck (suprasternal notch), jaw, even in the face and eyes. So in milder angina these radiated pains are to be noted, and they may prove of the greatest help in recognizing and assessing the significance of indefinite substernal discomfort.

The difficulty in diagnosis is increased when there is an entire absence of complaint of pain or tightness in the chest. In most instances, however, cross-examination will elicit the presence of some such substernal discomfort if the effort inducing the attack is unwisely persisted in. As an example of this the following case may be quoted.

CASE I.

In December, 1923, a man, aged 69, complained of severe neuralgic pain in the neck. The pain was crushing in character and situated in the suprasternal notch. It had occurred on several occasions in the two months before his visit. The teeth had been suspected and one extracted, but the pain recurred. It was brought on chiefly by exposure to cold, and also (although not so noticeably) by walking or effort. It was relieved by a hot drink or by going into a warm room. It did not radiate either into the back, or shoulder, or arms, but if he persisted in walking, or in whatever effort he was undertaking at the time, he developed an aching pain behind the manubrium. This important fact was only extracted by persistent cross-examination. Pain was also brought on by getting out of a warm bath and during the unavoidable exposure while drying himself.

He was firmly convinced that the trouble was in his throat, and he had seen several throat men, who had been unable to give him any relief. His throat was normal. There was some arterio-sclerosis, such as one would expect in a man of his age, and the blood pressure was normal.

I class this man as an angina minor of an eccentric type. Two other rather similar cases will further illustrate this point.

CASE II.

A man, aged 65, was first seen by me on March 13th, 1925. He complained that he had to stop when walking because of a peculiar feeling in the epigastrium. Persistence in walking caused salivation. Occasionally he experienced a sense of pressure in the chest behind the sternum, as if something within was pressing outwards. These symptoms were always more easily induced after a meal. He was a spare man, and was never seriously ill. There was a moderate degree of arterio-sclerosis. Blood pressure 185/110 mm. Hg. The symptoms were first noticed six years before he consulted me, but had been much worse during the last nine months.

On April 27th, 1926 (a year later), his condition was satisfactory, but he was still liable to the above symptoms.

The following is an interesting example of eccentric angina of a minor grade.

CASE III.

A male, aged 59, first seen on March 17th, 1924. In this patient walking induced an aching neuralgic pain in both gums, first the lower jaw and then the upper. The pain was more liable to come on when he went out into the cold air or "of an evening with the little dawg." Pain, first felt in the jaws, was next experienced in the epigastrium—"like unto indigestion"—and was associated with a feeling of complete exhaustion and collapse. All these symptoms vanished in a minute or two if he stood still.

He first noticed pain in the jaws three years previously, and on the advice of his doctor every tooth in his head was removed. This was followed by considerable improvement, although the pain in the jaw was still occasionally felt after effort. Six months ago, however, it was as severe as ever.

On examination there was no evidence of valvular disease; there was very marked emphysema, and the voluminous lungs made it impossible to determine the size of the heart. He had definite arterio-sclerosis; a blood pressure of 160/85 mm. Hg; cardiac rhythm normal.

These three cases are exceptional, but they serve as examples of erratic manifestations of angina minor.

A more common form of related or erratic pain is a dull ache or cramp in the shoulder or arm. This is usually described by the sufferer as neuritis or rheumatism, and when it occurs—as it not infrequently does—without much, if any, pain in the chest, it is misleading and its significance tends to be overlooked.

The most important feature in all these erratic or eccentric anginas is that the pain, wherever it may be localized—neck, face, wrist, shoulder—is brought on by effort or exposure to cold, and is relieved by rest and warmth. The "indigestion" and the "rheumatism" in the arm or shoulder are both dissipated by cessation of effort.

It is to be remembered that accompanying these substernal sensations of angina minor there is sometimes a peculiar psychical disturbance—an uncanny intangible sense of foreboding, a vague dread, a recognition that there is something fundamentally wrong, an apprehensiveness which may persist long after the symptoms have disappeared. This peculiar anxiety, which does not indeed attain to the angor animi, the sense of impending death, accompanying the major seizure, bears no relation to the degree of pain or discomfort, but is most suggestive and characteristic; Sir Clifford Allbutt regarded it as adding definitely to the gravity of the prognosis.

EXAMPLES OF ANGINA MINOR.

As fairly typical examples of angina minor I will relate briefly the following cases.

CASE IV.

A man, aged 64, complained of gripping pain of moderate intensity and a sensation of pressure, unaccompanied by any dyspnoea. The pain was substernal, at the level of the third space, and covered an area the size of a crown. It was induced by walking and ceased at once when he stood still. If he persisted, pain and numbness appeared in the left forearm and hand. He had suffered in this way for two years, and had been under continuous treatment for "indigestion."

CASE V.

In another patient, a man aged 56, the first indication of trouble dated back to December, 1920, and consisted in pain across the chest at the level of the nipples, brought on by walking up a slight incline. If he stood still it subsided. It ceased to trouble him, but recurred in March, 1921, when it was looked upon as "indigestion," but, as his doctor said, a diagnosis made "with mental reservations." A fortnight later he had five attacks of severe angina arising in the same area, and accompanied by pain extending from the tip of each shoulder down the arms to the thumbs. He thought he was dying during the acme of the attack, and was left emotional and depressed.

CASE VI.

In April, 1923, a male, aged 52, complained of dull aching pain in the upper chest. The pain was situated just below each clavicle in the nipple line. When the pain was more severe it was accompanied by an uncomfortable feeling down the inner side of each upper arm and in the front of the forearm. It sometimes attacked him in the bathroom when dressing, and was described by him as an intense heartburn, a "hot pain." He often suffered on the way to the station in the morning, and the pain would last about ten minutes. It was relieved by rest, by the eructation of wind, and at times by stretching his chest. This pain was never agonizing. He had first noticed it in 1921 after an operation for rupture. He soon recovered and led an active vigorous life without discomfort.

The pain recurred two weeks before he consulted me in 1923, and I then found a heart moderately enlarged; blood pressure 180/100 mm. Hg; no valvular disease; no dilatation of the aorta; aortic second sound accentuated; only a moderate degree of arterio-sclerosis. Heart rate 72 and regular. He was a thin, spare, active man, and experienced no dyspnoea on exertion. I classed him as a case of angina minor. He improved considerably under treatment, but was always liable to pain if he hurried, especially after breakfast.

In October, 1924, he was awakened at 5 a.m. by very severe substernal pain radiating into the armpits. The pain extended the whole length of the sternum and radiated into the shoulder and into the arms. The blood pressure had fallen to 150/85 mm. Hg, and a soft mitral systolic murmur had developed.

I did not see him again. He died suddenly in March, 1926, in a cab, five years after the first appearance of the minor angina. With the exception of the severe attack of pain which awakened him in October, 1924, he gave no history of anything which could be called a major attack.

Since the work of the heart bears a relation to the body weight, an attempt should be made to bring the bulk of the body, when it is excessive, within normal limits. Careful dieting to obtain this result should be carried out and the results noted. An abnormally high blood pressure can sometimes be modified with definite relief to the overloaded myocardium.

Much can be done in the secondary anginas when by meticulous cross-examination the cause of the lowered threshold to pain has been discovered. All possible sources of persistent low-grade infections should be investigated and radically treated—dental sepsis, sinus disease, abnormal intestinal conditions, pyelitis, chronic appendicitis, etc.

An attempt must be made to eliminate worry and make sure of sleep. For this a mixture of ammonium bromide and phenazonum is especially helpful. In the readjustment of the patient's life, factors giving rise to mental strain and irritations should be obviated as far as possible.

As my last word, may I lay stress again on the very great importance of an early diagnosis when the symptoms, though but slight and elusive, are both ominous and sinister. An accurate diagnosis *then*, followed by wise treatment, offers some chance of arresting, or at any rate of retarding, the development of the pathological changes responsible for angina.

THE ACTUAL PLACE AND FUNCTION OF THE TUBERCULOSIS DISPENSARY IN THE TUBERCULOSIS SCHEME.*

BY

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WHEN the council honoured me with the request to open this discussion I accepted with alacrity. The fascination of tuberculosis has held me a bondsman throughout my professional life. The range of interests is always widening. In offering a few thoughts for your consideration it will be my endeavour to do so briefly and simply, in the hope that it may stimulate members of the Conference to give us freely of their experience.

Forty Years Ago.

It is difficult to-day for the man in middle life—and still more for the younger man—to realize the attitude of mind towards tuberculosis which prevailed forty years ago and previously among both doctors and laymen. What was *then* accepted as care and treatment is *now* hardly imaginable.

The victim of tuberculosis—so-called consumption—was for the most part recognized too late. He was generally expected to die. The treatment meted out to him was empirical, unphysiological, and usually futile. The vain attempts at protection tended to hasten the end. With the death of the patient the interest that had been kindled by his illness was extinguished.

Speaking of the expectancy of life of the consumptive patient, Dr. C. J. B. Williams, in his treatise on *Pulmonary Consumption* (1871), says, with reference to the first ten years of his practice, 1830-40: "My general recollection of the histories of the developed disease at that time is that of distressing tragedies, in which no means used seemed to have any power to arrest the malady; and life was rarely prolonged beyond the limit of two years, assigned by Laënnec and Louis as the average duration of the life of a consumptive."

Conception of Tuberculosis Dispensary (1887).

Let me try to recall some of the circumstances and events which led to the remarkable alteration of outlook and action which now prevails.

It is some forty years since, following on the discovery of the essential cause of tuberculosis, its infective nature came to be admitted. While engaged in laboratory work on tubercle, and attached to a general medical dispensary, it was borne in on me that acceptance of the infective nature of the disease carried with it far-reaching consequences. It seemed clear that, the infective nature of tuberculosis being granted, the principles which had been effectively applied in relation to other infective conditions were, with appropriate modifications, applicable to tuberculosis likewise.

Apart from a few special hospitals devoted to diseases of the chest, the chief avenue to care and treatment open to the poorer citizen suffering from tuberculosis forty years ago was by way of the out-patient department of a general hospital or similar medical institution. What happened daily in out-patient departments amounted to this—that the patient, suspected to be suffering from what was then spoken of as consumption, was examined for the presence of certain recognized signs of chest disease; when such were ascertained to be present, the sick man was accorded a prescription for his cough or other chief symptom, and commonly for cod-liver oil, and was invited to report himself from time to time for similar consideration and treatment. Occasionally he was passed on for admission to hospital, when such facilities were available. The number of special beds at that date was extremely scanty, and he was not very warmly welcomed in the general wards. The demand on beds was out of all proportion to the number of tuberculous applicants, with the result that even the small percentage which attained admission enjoyed the available benefit for a relatively short period. There was little serious effort to ensure anything more than amelioration or arrest of existing symptoms. The infective nature of the disease hardly came under review; nor were the facts of the illness linked in any close fashion with the conditions of the patient's home and household.

All this was radically wrong. It involved a disregard of the natural history of the disease, its infective origin, its widespread distribution, its lengthy course, its protean manifestations, its dependence on environmental conditions, its tractability when efficiently handled for a sufficient period, and many other facts which we now regard as commonplaces.

Reflection on such lines led me to press for a wider conception and fresh line of procedure. The proposal culminated in the establishment of the tuberculosis dispensary in 1887.

Purpose and Programme.

The essential purpose was the creation of a centre towards which patients suffering from this infective disease, and the friends of patients, and the public, could readily turn for every sort of direction and help, and from which there would radiate information of many kinds for the guidance of individual patients, households, and the community as a whole.

The original aims of the tuberculosis dispensary have been often detailed. They are so well known that on the present occasion there is little need to recapitulate them in detail. They constituted the first attempt to hunt down the infection, to discover the haunts and methods of the invader, and to raid him on his own territory. The principles and methods were incorporated in the well known circular of the Local Government Board of Scotland, dated March 10th, 1906, which reproduced *in extenso* a paper given by me to the International Congress at Paris in 1905. The principles and methods were frankly accepted by the Departmental Committee on Tuberculosis (1912), which adopted the programme of the Edinburgh Tuberculosis Dispensary as a model for the tuberculosis dispensaries of the country.

The Departmental Committee, in describing the functions of the tuberculosis dispensary, affirmed that it should serve as (1) receiving house and centre for diagnosis; (2) clearing house and centre for observation; (3) centre for curative treatment and supervision of ambulant cases; (4) centre for the methodical examination of contacts and the investigation of environmental conditions; (5) centre for continuous care of patients—so-called "after-care"; (6) information bureau and educational centre. The Departmental Committee placed the tuberculosis dispensary

* An address introductory to a discussion at the twelfth annual Conference of the National Association for the Prevention of Tuberculosis, Glasgow, July 1st, 1926.

unwise to make such a diagnosis in the young if neither aortic disease nor an abnormal blood pressure is present. In fact, the diagnosis must be made on the character of the pain and not on the physical findings. Too often a correct diagnosis of angina is refused because on physical examination either nothing abnormal is found or there is only a moderate degree of enlargement. It must be remembered, before passing a heart as normal, that emphysema masks an increase in the size of the heart, and also makes it difficult to recognize any abnormality in the heart sounds.

Pain in the region of the heart is a common complaint in most patients with valvular disease, and in many others, especially in young males presenting the symptoms of the "effort syndrome" (the D.A.H. of army days). But this pain, though cardiac in origin, is not entitled to the label "angina." In this group the pain is submammary and often felt directly over the cardiac thrust. It may be stabbing, or an ache, and the skin and muscles of the adjacent areas are often tender on palpation, especially directly over the apex beat. Hyperaesthesia is much more noticeable in these patients than in the anginas.

Although usually induced or aggravated by exercise, the pain is often quite independent of effort and frequently occurs when the patient is in bed; and it may be accompanied by troublesome palpitation. If the pain does extend into the arm it is nearly always diffuse, involving the whole arm, and often both arms. It is less likely to have the segmental distribution or the characteristics of anginal pain. Occasionally it extends from head to foot, limited to the left side, and when the pain is bad there may be great nervous excitement—sometimes even nervous rigors—followed by a condition of prolonged nervous prostration. This is in great contrast to a primary angina, where cessation of an attack as a rule leaves the patient comfortable and free from physical distress.

The following is an example of cardiac pain which presents the characters of a secondary angina and which had been looked upon as major.

CASE IX.

A nurse, aged 30, was examined on April 9th, 1926. She was tall, with red hair, and a healthy complexion, and was alarmed and anxious about her heart. She complained of pain just to the left of the sternum in the fourth intercostal space. It was as if something was pressing hard on the chest. It caused her breathing to stop, and radiated into the left arm, involving the whole arm from shoulder to wrist in a cramp-like pain. The pain was induced by effort or annoyance. Examination showed a heart normal in size and sounds, free from any indication of disease. Blood pressure 125/75 mm. Hg. Heart rate regular. The heart sometimes raced at 100 to 120.

This patient's symptoms date from a sharp attack of influenza two and a half years before. Ever since she has been liable to vasomotor blotching, and her hands have been blue and cold in the winter. In addition to dyspnoea, she becomes dizzy and faint on climbing the stairs; she wakes in the night with a sensation of shortness of breath, which sometimes lasts for ten to thirty minutes. The attacks are always worse after she has been nursing a "bad case," and also after a period of excitement, but not while excited.

There are certain features in this patient which are very suggestive, and indicating that there are factors outside the heart; the vasomotor system is unstable, and the effect of any nervous exhaustion is noticeable.

THE OUTLOOK IN ANGINA MINOR.

The prognosis is admittedly difficult when the patient is afflicted by major angina; it is doubly so when the symptoms are of the slight, transient, mild degree present in angina minor. The great danger is that of a wrong diagnosis. The anginal element in the complaint is wrongly interpreted, until the "grand mal" stage arrives, and the diagnosis is "writ plain for all the world to see."

In angina minor the prognosis must be based on a consideration of the same facts as in angina major. It is the integrity of the myocardium and the soundness of the arterial tree that matters, and, of course, primary angina of the minor type is more serious than secondary angina minor.

The more reasons there are for believing that the threshold for pain is below normal, the better the outlook, and when the causes for the lowered threshold to pain can be removed there is still further reason for a tempered optimism. Subinfections, mental worry and strain, insufficient sleep, and factors of this kind can be treated, removed, or neutralized. The prospect brightens in so far as this can be carried out satisfactorily.

It is not wise to venture on any prognosis when the pain dates from a recent pyrexial attack such as influenza. The myocardium may take some months to recover from the transient toxaemia, and during the convalescence the symptoms may be misleading. Persistence in the liability to pain and discomfort in spite of treatment is an unsatisfactory feature, especially if combined with it there is clear evidence of cardiac embarrassment accompanied by enlargement of the heart. A high blood pressure, peculiarly enough, does not appear to add to the gravity of the prognosis. My figures for all anginas gave the average duration of life from the first appearance of pain as four and a quarter years in the high pressure cases (180 mm. Hg and over), and three and a half years in the group with pressures under 180 mm. Hg. As in many of these patients there was a year or two when the symptoms were of the mild minor type, before major angina developed, I feel inclined to view the minor angina with low blood pressure as probably less satisfactory than when the pressure is high.

When there is a clear history of syphilis the prognosis should be guarded until a full course of antisyphilitic treatment has been carried out, for occasionally the improvement is marked. Dr. Cotton has proved that the liability to attacks was diminished and the duration of life prolonged by vigorous antisyphilitic treatment in anginas of syphilitic origin. My experience definitely corroborates this. Potassium iodide in massive doses is not enough; the patient should have two courses of intravenous novarsenobillon and prolonged mercurial treatment.

The family history is always worth considering when reviewing the prognosis. The tendency to hyperpiesia is sometimes a family characteristic, and in such families death is common from angina, cerebral haemorrhage, or cardiac defeat. With such a family history the expectation of life is poor over 50, and the mere grumbling of angina minor is exceptionally ominous. At times the electro-cardiograph findings indicate a speedy excitus, especially when they reveal the presence of a branch bundle lesion. Even when there is no evidence of a bundle lesion other well recognized deviations from the normal may be met with which have a sinister significance. The following case is of interest in this connexion.

CASE X.

In May, 1925, a medical practitioner, aged 60, complained of a "raw feeling" across the upper sternum, described by himself as pleurodynia, which he did not view with any apprehension. This sensation was noticed on going out of the house. Exposure to cold or damp would bring it on, but in a warm room he felt no discomfort. It did not interfere with his breathing. He had never been ill in his life, and this was the first time he had ever consulted a doctor. He had only noticed this queer sensation for four weeks.

On examination the pulse was 84, regular, not perceptibly collapsing. Arteries just palpable. Blood pressure 170/55 mm. Hg. The heart was 4 inches to the left of the mid-line; there were no thrills. Over the aortic area I heard a to-and-fro bruit, and the aortic second sound was not audible. A soft diastolic murmur conducted towards the apex could just be heard. The urine was normal.

On May 22nd an electro-cardiogram demonstrated a right branch bundle lesion. The blood pressure had dropped to 135/55 mm. Hg. The heart rate was 84, regular and normal.

On June 7th he had an attack of major angina which killed him in a few minutes. The total duration of life from the first indications of minor angina was only eight weeks.

TREATMENT.

My remarks on treatment must be brief. In the *Lancet* of November 8th, 1924, I discussed this fully, and the general principles indicated there apply with equal force to the minor form of angina, and, it might be added, with a fairer prospect of satisfactory response.

A damaged heart necessitates a sheltered life, and the reasons for the restrictions advised should be frankly explained to the patient. His full co-operation is imperative, and he must face his limitations and live within them. The efficiency of the myocardium must be maintained by adequate rest, a regulated life, and such medicinal measures as haematinics. When syphilis is an etiological factor, appropriate and efficient antisyphilitic treatment is, of course, imperative.

pulmonary tuberculosis, although these constitute for the most part a late manifestation of the infection. Even then the investigation of the patient lacks reality and thoroughness. The idea of using the pronounced case of infection as a clue to the earlier—the conception of hunting down the infection in the households of the area with a view to its eradication—is overlooked or ignored. The opportunity of the dispensary as a field of fresh observation in many directions is entirely lost. With so limited an outlook the work tends to become routine.

Such procedure cannot be expected to lead us very far towards the final goal. As I ventured to say on a previous occasion:

"The calm repose of the physician who, stethoscope in hand, decides for or against a cavity in the lung, and then contents himself with prescribing cod-liver oil, and perhaps a chronic pectoral mixture, must be disturbed. His cerebration and locomotion both require stimulation, so that he may be led to anticipate the disease by earlier diagnosis, and to determine the potentialities of contagion in the home. With the infection detected he must leave no stone unturned in the study of the patient's life-history and environment, which may throw light on causation or maintenance of disease. Chiefly must the physician concern himself with the health of the rest of the household. The whole family—or as many members as possible—must be scrutinized with scientific suspicion.

"The patient will not be sent home merely rich in weighty counsels. He will be followed to his home by doctor and nurse with trained eye and skilled finger, prepared to observe and sift every fact and to hold a critical 'march past' of the household. That is the way to raid the haunts of the tubercle bacillus effectively."

Searchlight Installation.

Ernest Renan compared the human conscience to a lighthouse with recurrent flashes of illumination which guide the uncertain mariner on the sea of life. I like to think of the tuberculosis dispensary as a searchlight installation in the vast tubercle-tainted plantations of our communal life.

In proportion as the installation is complete and the operators are understanding, results will surely follow. The instrument suffuses with light the area of operations so that no facet of the problem remains in shadow. It superilluminates every case of tuberculosis and ensures a just appreciation of its character and bearings. The penetrating ray enters the home and, linking effect with cause, brings the means of healing and the assurance of prevention to each of the dwellers.

And, throughout the area thus illuminated, watchful observers "battling with custom, prejudice, and disease," may yet snatch further triumphs and gather new facts and ideas of which, to-day, we hardly dream.

HYPOGLYCAEMIA DUE TO INSULIN IN CHILDREN.

BY

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IT is not widely known that the level of blood sugar at which symptoms of hypoglycaemia occur is decidedly lower in children under 12 years of age than in adults. There is some variation in the level at which symptoms arise following insulin administration in adult diabetics. This is observed not only when comparing one patient with another, but also in repeated observations on the same patient. In my experience the level of blood sugar when hypoglycaemic reactions occur in the adult usually lies between 60 and 80 mg. per 100 c.cm., though very occasionally values as high as 100 and even 110 or 130 mg., or as low as 50 mg., have been encountered at the time of the reaction. Anomalous results (outside the range of 60 to 80 mg.) have been experienced too often now to be explicable solely on the basis of analytical errors. It is possible that the rate of fall of the blood sugar is of more consequence than the actual level in determining the onset of symptoms, though I have not uncommonly met with rapid falls (for example, from 328 to 53 mg. per 100 c.cm. in five hours) without resultant symptoms. Another possible explanation is that it is the concentration of sugar in the central nervous system that matters, and the sugar content of the peripheral blood may be either above or below this critical value in certain circumstances.

In eleven diabetic children, aged 1 to 11 years, treated with insulin, twenty-eight analyses out of some hundreds showed a blood sugar of less than 50 mg. per 100 c.cm. without any concomitant clinical symptoms of hypoglycaemia. The lowest value was 28 mg., and the average of the twenty-eight analyses 39 mg. In three additional records (29, 44, and 45 mg. respectively) there were slight symptoms only. On thirty occasions in the above cases values between 50 and 59 mg. were found in the absence of symptoms. Typical examples follow. All analyses were made by Maclean's method, and in duplicate.

Case 1.—Male, aged 1 year and 2 months. Blood sugar on admission 442 mg. per 100 c.cm. On the third day of insulin treatment the blood sugar was 32 mg. four hours after the morning injection of 10 units, but there were no signs of hypoglycaemic reaction. Before the injection the blood sugar was 244 mg. The diet at this time consisted of 24 oz. of milk daily. On six subsequent occasions the blood sugar was reduced to values between 28 and 49 mg. per 100 c.cm. some three to five hours after 6 units of insulin, without any signs of a reaction. On another occasion there were definite signs of hypoglycaemia. The baby was pale and slightly drowsy. He tended to fall forward, burying his head in the clothes. Blood analysis yielded the figure 44 mg. sugar per 100 c.cm. Five grams of carbohydrate (orange juice) restored the patient to normal.

The low levels of blood sugar are striking in this baby. As in adults, the level at which clinical signs occur is not a fixed point. On one day there were definite signs with a blood sugar of 44 mg., on another no signs of a reaction with a blood sugar of 32 mg.

Case 2.—Female, aged 2 years and 1 month. The daily diet contained 37 grams of carbohydrate, 31 grams of protein, and 50 grams of fat; 10 units of insulin were given daily. There were no signs of hypoglycaemic reaction on seven occasions on which the blood sugar varied from 32 to 49 mg. per 100 c.cm. There were slight but definite signs (pallor and extreme hunger) on one occasion when the blood sugar was 29 mg. per 100 c.cm.

Case 3.—Male, aged 3 years and 3 months. The blood sugar was 46 and 49 mg. per 100 c.cm. respectively on two occasions when there were no signs of a reaction.

Case 4.—Female, aged 4. Blood sugar 38 mg. per 100 c.cm. unaccompanied by clinical symptoms.

Case 5.—Female, aged 6. No symptoms when the blood sugar was 49 mg. per 100 c.cm.

Case 6.—Female, aged 9. Slight symptoms with blood sugar of 45 mg. per 100 c.cm. Symptoms relieved by 5 grams of carbohydrate (orange).

Case 7.—Male, aged 11. Fixed diet of 60 grams of carbohydrate, 70 grams of protein, and 140 grams of fat daily. He was given 8 units of insulin half an hour before breakfast, and 5 units a quarter of an hour before tea. The blood sugar results are shown in the following table. There were no signs or symptoms of hypoglycaemic reaction throughout. The boy walked to the laboratory from the ward, and "played about" in the intervals between the collections of the samples of blood.

Date.	Blood Sugar, mg. per 100 c.cm.					
	Hours after Morning Dose of Insulin.					1½ Hours after Evening Dose.
	1½	2½	3½	5	6	
1925.						
April 19th ...	63	60	55	137	123	—
April 26th ...	—	53	—	62	—	53
April 27th ...	—	43	—	61	—	55
April 28th ...	—	35	—	108	—	—
April 29th ...	Morning dose reduced to 5 units.					
May 3rd ...	—	61	—	108	—	53
May 4th ...	—	59	—	—	156	—

It will be seen that in children the blood sugar may fall some 20 to 40 mg. below the "adult hypoglycaemic level" and yet be unaccompanied by signs of a reaction. It is well recognized that the general level of blood sugar in children is lower than that of adults, and therein may lie the explanation of these observations.

There is another point of practical importance. The hypoglycaemic reaction is not nearly so well defined in children as in adults. In the younger children and infants,

* Working on diabetes with a grant from the Medical Research Council.

as the first unit in the tuberculosis scheme and confirmed the view

"that the tuberculosis dispensary should be the common centre for the diagnosis and for the organization of treatment of tuberculosis in each area, at which the various bodies and persons connected with the campaign against tuberculosis should be brought together. The aim should be that no single case of tuberculosis should remain uncared for in the community. . . . The tuberculosis dispensary should be linked up to those institutions (hospitals, sanatoria, farm colonies, open-air schools) for which it will act as a clearing house."

Larger Results.

For the moment we are less concerned with the original purpose but rather with results which have emerged and developed from the continuous application of the methods proposed. Forty years constitute a period of sufficient length to enable us to appraise the significance of the activities.

At the outset you will allow me to say that, great as seemed the possibilities at the start, appreciation of their extent and value has grown with each succeeding year. A few of the more conspicuous developments may be cited.

1. *Widespread Distribution of Tuberculosis.*—The tuberculosis dispensary has demonstrated, as no other agency could, the extensive ramifications of tuberculosis throughout the area served by the dispensary. It has collected living proof of the universality of tuberculosis throughout the community. A comparison of maps showing the distribution of tuberculosis, taken at successive intervals throughout the area, demonstrates that the more an area is thoroughly investigated, the more is the population found to be permeated by the tuberculous taint. It has shown further that different portions of a given area differ in degree of saturation. It has thus thrown a flood of light on the influence of environment as a factor in the production and maintenance of tuberculosis.

2. *Spread through Households.*—By the systematic examination of households—the "march past" of the contacts—it has afforded incontrovertible evidence of the spread of the disease throughout a household from a primary source of infection.

3. *Infection in Childhood.*—It has emphasized the frequency with which tuberculosis is contracted in childhood. In household after household it has determined the existence of tuberculosis in the majority of the children involved. As many as fifteen cases have thus been detected by systematic search in one family circle alone.

4. *Heredity.*—Its investigations have dealt a serious blow at the doctrine of heredity—fondly cherished as that doctrine still is by some who are little acquainted with the natural history of the disease. The investigations offer strong support to the applicability of the views based on the observations of Bang and others in cattle, to the effect that the tuberculous mother very seldom produces offspring already tainted by tuberculosis, and that the offspring of such mother is saved from the risk of infection from the mother in proportion as it is protected by separation from her, while, conversely, the risk of early contraction of tuberculosis is accentuated in proportion as close contact with the infected mother—or with other infected member of the group—is maintained. Tuberculosis is thus seen to be a family or household disease, not because of hereditary transmission, but because of the abundant opportunities afforded for the transmission of infection from one infected individual to the other members. This risk exists in high degree in the earliest years of childhood.

5. *Recognition at Earliest Moment.*—The system of examining contacts has not only detected many cases that otherwise would have been missed. It has also afforded opportunity for the very early detection of infection as it occurs in successive additions to the household. It has shown how it is possible by careful observation to register in a growing family the actual advent of infection in successive children. In this way it has rendered possible the practice of anticipatory treatment—that is, of treatment, antigenic or other, which has in view the raising of the resistance of the infected individual with a view to preventing the worse consequences of such infection.

6. *Continuity of Observation.*—The dispensary has thrown a flood of light—by its continuity of treatment and care—on the natural history of tuberculosis. It has enabled the observer to follow the child from the moment of recognized infection throughout a long period of years. In this way it has been possible in my own experience to observe the same infected individual throughout twenty to thirty years and longer.

7. *Natural History of the Disease.*—By this means it has been possible to construct a picture of the successive manifestations which most commonly repeat themselves in the evolution of tuberculosis. It has shown that in the vast majority of cases there is a gradual extension—just as in the experimental animal—from the point of primary infection by way of the lymphatic system, until the deeper viscera are successively involved. The dispensary has thus served to illuminate the relation of pulmonary tuberculosis and the more likely points of entrance of infection, and has relegated pulmonary disease to its proper place as constituting for the most part a relatively late visceral involvement.

8. *Continuity of Infection.*—Observations at the dispensary have shown, not only the continuity, but the varying manifestations of the tuberculous process in the same individual throughout a long series of years. It has revealed the ebb and flow in the progress of infection throughout a long life. It has shown how cases in the so-called third stage of pulmonary disease—with cavity formation which used to be regarded, and is still regarded by many, as the terminal picture—may yet live and go comparatively strong for thirty years or longer. It has illustrated how a cavity, especially when it occurs in young subjects, may, during the process of growth and development, gradually contract and finally disappear.

9. *Necessity for Long Supervision.*—By continued observation on ambulant patients and on those who have undergone sanatorium or other institutional treatment, the dispensary has proved how essential is the prolonged maintenance of such supervision, and how valueless may be the result of short periods of residential treatment—as, for example, the classic three months in a sanatorium, mere snippets in relation to the time limit necessary for the establishment of sound and effective arrest by the necessary histological changes.

10. *Economy in Treatment.*—Continuous, prolonged supervision at the dispensary has demonstrated how much can be done for tuberculous patients by ambulant treatment. From the records abundant proof may be had of how health may be maintained successfully without much expenditure. By means of weekly, fortnightly, or monthly guidance received at the dispensary, large numbers of patients may be kept on their feet and successfully treated without recourse to the sanatorium, or following on sanatorium treatment—and this at a minimum of cost.

11. *Housing: Reform in the Home.*—By a sound system of domiciliary visitation, the dispensary has succeeded in reforming homes and households, reducing the effects of unhealthy environment and recreating insanitary houses after the image of the sanatorium. In this direction the dispensary's educational value to a community through doctor and nurse can hardly be overestimated.

These examples of the far-reaching activities of the tuberculosis dispensary might be multiplied. They are cited merely as illustrations. Others will emerge in the course of the discussion from able men who, in town and county, have had many years' experience in developing and refining this significant instrument of preventive medicine.

What the Tuberculosis Dispensary should not be.

In drawing these desultory remarks to a close, a few words seem desirable on the other side of the picture—namely, what a tuberculosis dispensary should *not* be.

The establishment of the tuberculosis dispensary was a reaction from the comparatively ineffective out-patient department of the past. Splendid work has been effected by tuberculosis officers in different parts of the country; yet visits to not a few dispensaries, and extended inquiries in different directions, constrain me to the view that the ideal of the dispensary and its great possibilities are not realized everywhere.

It is unfortunately common to find that the tuberculosis dispensary concerns itself solely or chiefly with cases of

are not already closed by the disease. Sodium bromide was at first tried instead of lipiodol, but it was found that it was very apt to soak the wool and escape. It is also as well to apply a piece of wet wool to the puncture hole in the inferior meatus as soon as the needle has been removed, to prevent escape of lipiodol in this situation.

The lipiodol may be removed with the Watson-Williams syringe, the needle of which can be placed in the puncture hole formerly made. In other cases, as the antrum will be opened surgically later, the lipiodol may be left *in situ* till the operation, as it is sterile when injected.

The accompanying figures are reproductions of antero-posterior *x*-ray photographs; they show a normal maxillary antrum injected with lipiodol, and an antrum containing an epithelioma. In the latter the lipiodol has filled those parts of the antrum not occupied by the growth. The pieces of wool in the nose are well seen.

PINNING THE FRACTURED ULNAR STYLOID PROCESS IN COLLES'S FRACTURE.

BY

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MANY patients who have suffered Colles's fracture complain, months afterwards, far more of weakness of the wrist-joint and pain over the ulnar styloid process than of the radial fracture. An *x*-ray examination of these cases shows that this is caused by a fracture and separation of the ulnar styloid process.

There is no doubt that the successful treatment of Colles's fracture depends upon accurate reduction of the radial fracture; but there are many cases, especially those of impacted fracture of the radius, in which reduction is difficult and is not always accomplished successfully without open operation, and it is in these cases that separation of the ulnar styloid process is the cause of pain and weakness in the wrist-joint, often many months after fracture. This after-result of Colles's fracture impressed me so much that I began to pin the fractured styloid process of the ulna.

Although the fractured radius may be accurately replaced, yet if *x*-ray examination shows the styloid process of the ulna to be still separated, open operation should be performed in order to get good bony union of the fractured surfaces, and not the fibrous union which would otherwise result. It is by this means that pain and weakness of the wrist-joint can be prevented.

Anatomy textbooks state that arising from the styloid process of the ulna is the strong internal lateral ligament of the wrist-joint, which is attached to the rough non-articular border of the cuneiform bone, some of its fibres being prolonged to the pisiform bone. It seems to me that if this strong internal lateral ligament of the wrist-joint is rendered useless by want of accurate approximation of the fractured ulnar styloid, where this separation is shown by *x* rays to be present the only thing to do to prevent resultant pain and weakness is accurately to approximate the fractured surfaces and pin them into position and ensure sound bony union.

In those cases of impacted Colles's fracture where reduction is impossible because the fractured lower end is caught up in the pronator quadratus muscle and open operation is necessary, then, should there also be a complicating fracture of the ulnar styloid, this too should be operated upon. Hence it seemed to me common sense that the fracture of the ulnar styloid process should not be overlooked. I have devised an open operation which is, I understand, original—it is very simple and takes only a few minutes to perform.

A vertical incision is made directly over the fractured ulnar styloid, and the fractured surfaces are exposed. They are found separated by several millimetres (as shown by the skiagram), and frequently the distal end of the fractured styloid process is so pulled upon by the strong internal lateral ligament that it is rotated as well as separated, and its base tilted upwards and towards the extensor surface of the forearm, proving that without open operation bony union is even more impossible than it is with simple separation. (The *x*-ray picture will not show this tilting of the fractured tip of the styloid process.) With the thumb and index finger of the operator's left hand the fractured styloid process is accurately replaced, and, being thus held in position, an ordinary straight bayonet-shaped needle is, with a hammer, driven through the fragment into the lower end of the ulna in a direction downwards and slightly towards the flexor and radial side of the forearm. When the needle has been driven sufficiently far to fix the styloid fragment the needle is cut off with wire-clippers, the fascia replaced, and the wound sewn up. The forearm is placed on an ordinary Carr's splint for seven to ten days, after which the splint is discarded, the stitches removed, a firm bandage applied, and massage and passive movements started forthwith.

This operation is very simple and takes only a few minutes to perform, and I maintain that where, with separation of the fractured surfaces, this fracture complicates a Colles's fracture, the pinning of the styloid ulnar process should always be performed, and will prevent resultant pain and weakness of the wrist-joint. But at the same time it must be understood that accurate radial reduction is the first and foremost object in the treatment of Colles's fracture.

The *x*-ray photograph is from a recent case which I consider typical, because after accurate radial reduction there remained separation of the ulnar styloid process. The patient was a lad aged 16, and I feel confident that without open operation and pinning of the ulnar styloid he might have had a permanently weak wrist which would have interfered seriously with his efficiency in after-life; whereas he now has firm bony union of the fractured styloid process and as strong a wrist-joint as he had before his accident, without any pain, weakness, or deformity.

CONGENITAL ABSENCE OF THE PECTORAL MUSCLES.

BY

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PARTIAL or complete absence of the pectoral muscles is a condition comparatively frequently met with, and in a series of cases of congenital absence of muscles collected by Bing[1] loss of the pectoralis major (usually the pars sterno-costalis) and of the pectoralis minor together was the commonest abnormality to be present (28 per cent. of the total); absence of the pars sterno-costalis of the pectoralis major alone is the next most frequent type of abnormality, and was present in 9 per cent. of the cases. These figures are probably too high, owing to the fact that in the ordinary routine examination of patients this abnormality is very readily noticed, while the detection of most of the other muscular defects requires a more detailed examination.

A case of complete absence of both pectoral muscles on the one side is recorded by Severn,[2] but the absence of both major and minor is a very rare occurrence—usually the clavicular part of the pectoralis major remains, and often undergoes considerable hypertrophy. Absence of the

of course, we are dependent solely on objective signs, and even the older children often are not able to describe their subjective symptoms as well as adults. In children the first signs of a hypoglycaemic reaction are often pallor, an unusual quietness, lassitude, and a tendency to doze whilst undisturbed; when examined, fretfulness and a greater tendency than usual to weep or cry are noted. None of these signs can be regarded as characteristic, for any or all of them may occur apart from hypoglycaemia. Sweating may or may not occur, but when it does it can hardly be regarded as a characteristic sign, sweating being not at all uncommon even in healthy children owing to excess of (bed) clothes, etc. Some writers consider that an increase in pulse rate is a valuable sign, but in my experience this is by no means constant and is not trustworthy.

Treatment.

The treatment of hypoglycaemia is well established—the administration of glucose or of other rapidly absorbed carbohydrates. The dose of carbohydrate depends on the degree of hypoglycaemia. In very mild attacks it is sometimes unnecessary even to give sugar. The patient may recover spontaneously or a cup of bovril or hot weak tea may suffice. In more severe but still mild reactions 5 grams of carbohydrate as orange juice (45 c.cm. or 1½ oz.) or as orange quarters (50 gm. or 1¾ oz.), or as one lump of cane sugar dissolved in water and flavoured, if desired, with lemon juice, are ample. If the symptoms have not obviously improved in fifteen to twenty minutes the 5 grams of carbohydrate should be repeated. Sometimes symptoms occur shortly before a meal is due; it is then often sufficient to give the meal or part of it a quarter or half an hour before the prescribed time. The exact details of treatment in any given case will depend on circumstances—whether the patient is at home or under close observation in an institution, the availability of blood-sugar determinations, etc.—but it should be an absolute rule to avoid treating hypoglycaemia with excessive amounts of carbohydrate and so rendering the patient hyperglycaemic. Of course, severe hypoglycaemic reactions demand larger doses of carbohydrate—for example, 15 grams as cane sugar (3 cubes); it may be necessary to give 15 to 20 grams of glucose by stomach tube, and this method can often be employed successfully even though the patient be semiconscious. Intravenous injection of glucose should be reserved for emergencies.

One practical point, sometimes forgotten, is that the sugar should invariably be administered in solution to ensure rapid absorption, and this is particularly important when hypoglycaemic symptoms are marked. One of my adult patients awakened one night with severe symptoms, and promptly swallowed with some difficulty two lumps of cane sugar. At the end of fifteen minutes the symptoms were worse, so she took some more lumps of sugar, and this was repeated till fifteen lumps in all had been devoured. The symptoms still persisted and she became very frightened. Fortunately she was then given some brandy and water, whereupon she came round in ten minutes. In the morning, of course, she was markedly hyperglycaemic (blood sugar 430 mg. per 100 c.cm.).

In children variation in the amount of exercise is a real difficulty, and not seldom accounts for hypoglycaemic reactions. Thus on several occasions I have been consulted by a parent who noted that her diabetic child had attacks of giddiness at the beginning of his holidays. The child played strenuous games in the garden in the holidays, whereas during term time he was seated at his lessons. Avoidance of severe exercise during the period two to five hours after insulin had been administered promptly caused the attacks of giddiness to cease. Adult diabetics soon learn to provide for unusually strenuous exercise by reducing slightly the dose of insulin, or by increasing the carbohydrate in the meal prior to the exercise; but it is much more difficult to make similar preparations in the case of children. The visit of a friend may result in a vigorous romp or in some quiet game; nobody can prophesy what will happen, least of all the child. The interference, unfortunate but absolutely necessary, with the spontaneous life of these little patients is one of the factors which make them so old for their years.

AN AID TO THE RADIOGRAPHY OF THE MAXILLARY ANTRUM.

BY

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THE following method is suggested as an aid to the diagnosis of cases of choanal polypus and new growth of the antrum, where an ordinary *x*-ray photograph often is of little use.

It can be ascertained in these cases whether a choanal polypus is coming from the antrum, and, if it is, whether

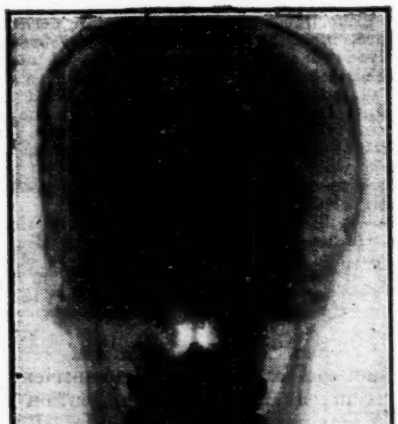

FIG. 1.—Skiagram of normal antrum injected with lipiodol.

it is attached in the usual situation or not. If new growth is suspected, the wall from which the growth is coming may often be decided.

Lipiodol (iodine in poppy-seed oil) is injected with the Watson-Williams syringe (the ordinary Lichtwitz cannula and a Record syringe may be used) into the antrum. Since lipiodol is opaque to *x* rays, the less opaque growth or

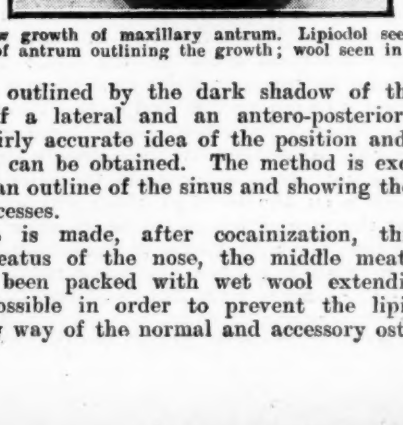

FIG. 2.—New growth of maxillary antrum. Lipiodol seen in outer part of antrum outlining the growth; wool seen in nose.

polypus is outlined by the dark shadow of the injected lipiodol. If a lateral and an antero-posterior view are taken a fairly accurate idea of the position and extent of the growth can be obtained. The method is excellent also for giving an outline of the sinus and showing the extent of alveolar recesses.

Puncture is made, after cocainization, through the inferior meatus of the nose, the middle meatus having previously been packed with wet wool extending as far back as possible in order to prevent the lipiodol from escaping by way of the normal and accessory ostia if these

while the clinical symptoms were very similar and typical histories were obtained of several other members of the family having been insane and having chorea, yet the pathological pictures macroscopically were very different. The brain of the woman was small and firm, there was no thickening of the pia-arachnoid, the ventricles were only slightly dilated, the cerebro-spinal fluid was only slightly in excess, and there was apparently no wasting of the grey matter or basal ganglia; the brain of the man was large and very soft throughout; there was marked thickening of the pia-arachnoid, which was also adherent; the ventricles were very greatly dilated and the subarachnoid and ventricular fluid in great excess; there was marked frosting of the ependyma of the lateral and fourth ventricles. The grey matter and the corpus striatum were brown, very soft, and considerably atrophied, especially the caudate nucleus. In the brain of the woman the cerebral arteries were in good condition; in the brain of the man they showed numerous rings of sclerosis. Other details are as follows:

Case 1.—A woman, aged 41 on admission on June 22nd, 1921; no occupation. Several members of her family had been insane and had chorea, including her father and two uncles. She was imbecile and had previously been in mental hospitals for five years. She had delusions of persecution; the chorea was then only slight, but gradually became more severe, rendering her unable to do anything for herself and making her speech unintelligible. She died five years after admission.

Case 2.—A labourer, aged 52 on admission on November 25th, 1925. One brother and one sister had chorea and died insane. One brother had chorea and committed suicide; one brother is living but has chorea; one brother and one sister are living and healthy. The father had chorea and committed suicide. Two paternal uncles and a paternal grandmother had chorea and were insane. The patient had suffered from chorea for many years; he was imbecile and had latterly become irresponsible, mischievous, violent, and obscene; on admission he could give no account of himself, and the choreiform movements affected the whole body, including the face, and made the speech an unintelligible jargon. He died five months after admission.

In each case the terminal cause of death was a rapidly spreading inflammation, starting, in the case of the female, in an ischio-rectal abscess, and in the male in a boil of the gluteal region. As to the rarity of the disease during the last twenty years, I have been able to find mention of only two other cases at this hospital.

I am indebted to Dr. W. Vincent, medical superintendent, for permission to publish these cases.

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POISONING BY TOBACCO APPLIED TO THE SKIN.

THE case of tobacco poisoning following inunction, reported in the JOURNAL of April 24th (p. 739) by Drs. Jones and Morris, calls to mind a case that I saw in Italy in 1918.

Whilst "resting" in a small village behind the line I was asked one evening to see an Italian soldier lying sick in a farmhouse in which some of our men were billeted. I gathered that the man was home on short leave, and would have returned to his unit that day had he not been taken suddenly ill.

I found a young man lying in bed obviously ill, drowsy, flushed, and irritable. He complained of sore throat, headache, and diarrhoea. His temperature was 104° and the pulse over 100. The fauces, soft palate, and pharynx were all very red, but free from membrane. There was a generalized erythema on the trunk and limbs. No paresis was noted.

He was handed over at once to the nearest Italian military authorities, who, in reply to my request for a diagnosis, informed me that the case was one of tobacco poisoning, the method of administration being that usually adopted in this particular form of malingering.

The method was as follows: two *toscani* (cheap Italian cheroots of great potency, usually cut in half and smoked by the poorer classes), having stood some hours in a glass of water, were placed at bedtime one in each axilla and held in position by a puttee or bandage. In some cases, in order to make more certain of the effects, the man drank the water in which they had stood. The following morning he generally went sick, and so escaped duty.

Unlike the case reported by Drs. Jones and Morris, the nicotine had not been removed from the tobacco by combustion, and consequently it was the probable cause of the vasomotor upset.

London, S.W. J. NISSEN DEACON.

THE BLOOD VESSELS OF THE HUMAN SKIN.

AN ABSTRACT OF THE CROONIAN LECTURES, DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS OF LONDON,

BY

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THE Croonian course delivered before the Royal College of Physicians of London by Sir Thomas Lewis consisted of four lectures given on June 8th, 10th, 15th, and 17th. It dealt with work done in collaboration with Drs. Grant, Love, and Zotterman, and was intended to stimulate interest in the study of human physiology as opposed to animal physiology; the results considered refer to man only.

The description given by Spalteholz of the arrangement of the vessels in the skin was adopted as the anatomical basis for the observations.

The colour of the skin is mainly due to the blood contained in the superficial venous plexuses. The capillaries may contribute in small part to this colour, particularly in such regions as the palms of the hands and soles of the feet, as they are more numerous in these sites than in others. The contention of Spalteholz that all the blood to the skin passes through the capillaries in the papillae is in accordance with one of their functions—namely, the dissipation of heat.

The chief methods available for the study of these vessels are:

(1) Direct observation through the microscope as employed by Lombard. The skin at the base of the nail is very suitable for such observation. The capillaries here lie horizontally; the arterial loop is seen to be finer than the venous and the subpapillary venous plexus can be made out dimly; the blood flow and the red and white corpuscles can be distinguished. The capillary loops vary in size and in conformation in one field of vision and become larger as age advances. It is important to remember that the vessels visible in this way form only a limited proportion of the total and that they are all endothelial structures. The horny layer of the skin is an obstruction to the view, and after its removal by blistering the picture becomes much clearer; arteries can be seen to come up and divide and the capillaries to join the subpapillary venous plexus. Blistering, however, is not justified for physiological observations, since it alters the normal state; physiological observations are therefore confined chiefly to the tips of the capillary loops.

(2) Estimation of skin temperature by means of a specially constructed thermo-electric couple; alteration of the skin temperature indicates a corresponding alteration in the blood flow.

(3) Observations of skin colour, from which an estimate of the relative rates of blood flow can be made.

The reactions of the skin vessels to injury are of great importance and interest. Light and heavy stroking of the skin with a blunt instrument results in the appearance of the well known white and red lines respectively. The white line is due to the active contraction of the minute skin vessels—capillaries and venules—while the red line is but an element of a much more complex reaction. The development of the red line is accompanied by the appearance of a surrounding and brightly coloured irregular flush and is followed, if the injury has been sufficiently severe, or in a susceptible subject (urticaria factitia), by the formation of a wheal along the line of stroke. The red line itself is due to the active dilatation of the capillaries and venules, and also possibly of the terminal arterioles, and is independent of the nervous system. The surrounding flush is due to an independent and widespread dilatation of the arterioles brought about by a local axon reflex. The wheal is due to an outpouring of fluid from the vessels as a result of a local change in the permeability of the vessel walls, an increase of permeability which is independent of the dilatation and is uncontrolled by the nervous system.

The mechanism of this triple reaction to mechanical injury has been elucidated by studying the effect of the introduction of histamine into the skin. The physiological

pectoralis minor unaccompanied by defect of the pectoralis major is said never to occur,[3] while only one case has been recorded where the condition has been bilateral.[4]

Heredity does not apparently play a very strong part in its production, since only once has the condition been noted in more than one member of a family—a case of father and two sons with this abnormality[5]—though other defects of development in the same family, such as accessory fingers or "webbed" toes, are occasionally met with. The pectoralis major is in some cases replaced by a fibrous band over which the skin becomes rolled, giving rise to a sickle-shaped fold which forms the anterior wall of the axilla.

Defects in the nipple and breast on the affected side are often present; both may be completely absent,[6] or the breast alone may be absent, with a rudimentary nipple, which is usually displaced upwards and inwards, as in the case described in this paper. There may also be a falling in of the chest on the affected side, due to defects in the cartilaginous portion of the second and third ribs; this portion may be markedly attenuated, or may be completely absent, its position being taken by a strong fibrous band.[7–11]

The amount of disability produced by the condition is, as a rule, extremely slight, as is seen by the case described by Burke[12] of a good left-handed baseball pitcher who had this abnormality on the left side, by the man recorded by Bruns[13] who was an expert turner, and by the student described by Stinizig[14] who was an excellent left-handed fencer, using his arm with the defect in preference to the other. In the case of the girl described in this article, with the abnormality on the right side, this arm was much stronger than the other, and she was able to throw a tennis ball twice as far with her right hand as with her left.

The most widely accepted view with regard to the origin of the condition is that advocated by Lewis,[15] who has shown that the pre-muscle mass from which the pectoral muscles are developed is situated in the lower cervical region in the early embryo and anterior to the first rib. As the embryo gets older the mass spreads out in the shape of a fan and moves downwards, becoming attached to the clavicle early and later to the ribs, sternum, and abdominal fascia, while at the same time it becomes differentiated into major and minor muscles. He believes that the condition is due either to (1) failure of attachment and subsequent atrophy of the pectoralis minor and pars sterno-costalis of the pectoralis major; or to (2) lack of complete differentiation between the muscles. Probably both factors play a part in its production, but in favour of the latter view is the fact that there is always marked hypertrophy of the pars clavicularis when present in addition to hypertrophy of the deltoid.

The case here described was that of a girl, aged 13 years, with absence of the pars sterno-costalis of the pectoralis major and the pectoralis minor on the right side. The condition is best demonstrated by getting her to put her arms straight forward and pressing her hands together. There is considerable hypertrophy of the clavicular portion of the pectoralis major and of the deltoid on that side. The muscle is not replaced by a definite fibrous band, the anterior axillary fold being formed by the clavicular part of the muscle. The breast on the right side is absent, and the ribs in that position are merely covered over with skin and subcutaneous tissue. The nipple is rudimentary, and is situated higher and nearer the middle line than on the other side. The ribs are normal, and *x* rays show no abnormality of the bony thorax; no scoliosis is present. There is no loss of power on the affected side owing to hypertrophy of the deltoid and clavicular part of the muscle.

It is of interest that she has also wasting of the left thigh and calf with some shortening—the result of an attack of acute anterior poliomyelitis when 2 years of age.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE VALUE OF ANATOMICAL DETAIL.

THE following case may be of interest as it serves to illustrate one of those finer details of anatomy which are apt to be forgotten and which sometimes assume considerable importance.

A married woman came to see me suffering from a wound on the dorsum of the right hand, a bowl having fallen from a height of about three feet on to her hand, splitting it open. The wound was comparatively clean cut, about one inch in length, and extended transversely across the extensor tendon of the middle finger, one inch from the metacarpo-phalangeal joint. On probing the wound it was found that the extensor tendon had been severed. In spite of this the patient could still extend the finger, although the movement was very slow and caused considerable pain. There was no apparent contraction of the extensor digitorum communis during the movement of extension. The patient was sent to hospital for treatment, but the diagnosis arrived at there was "extensor tendon half-cut." The treatment adopted was a skin stitch and finger splint. As I had informed the patient that the tendon was completely severed she naturally wished to have this little difference of opinion settled, and at her request I made an exploratory incision under local anaesthesia. I found the tendon completely severed, the proximal end having been drawn up the sheath for a distance of two inches. The sheath was opened and the tendon withdrawn in the usual way. The severed ends were then trimmed up and stitched together and the hand put up in a hand and forearm splint in full extension. Passive movement was commenced on the second day and active movement on the seventh. The splint was removed on the fourteenth day and the patient now has full use of her finger.

The point of interest lies in the fact that in spite of complete severance of the tendon the finger could still be fully extended.

The anatomical detail apt to be overlooked is that from the extensor tendon of the ring finger fibrous slips pass to the adjacent tendons. The slip going to the middle finger is inserted just proximal to the metacarpo-phalangeal joint. Before stitching the severed ends together the patient was asked to extend her fingers, and it could then be seen that it was this slip which was responsible for the function remaining. In addition, the insertions of the tendons of the lumbricals and interossei would also contribute in some degree to the movement of extension.

Glasgow. R. K. SHEARER, M.B., Ch.B.Glas.

HUNTINGTON'S CHOREA.

WITH respect to the commentary by Dr. Grimbly and Dr. Wilson on two cases of Huntington's chorea (BRITISH MEDICAL JOURNAL, May 8th and 15th, p. 820), and having regard to the pathology and rarity of the disease, I desire to record the cases of two patients who died within a day or two of each other in April last at the South Yorkshire Mental Hospital. One was a female and one a male, and

paper dealt with 900 cases, of which nervous cases formed a large proportion; pulmonary conditions also figured largely. Recurrent bronchitis among elderly teachers accounted for many of the absences, but phthisis was rare. The cardiac after-effects of influenza she had found very severe, and rheumatism affected more women than men teachers. In the indigestion group appendicitis accounted for many cases. The improvement in the condition of the mouth and teeth of teachers during the last ten years was most remarkable. Out of 900 cases there were only 12 in whom untreated pyorrhœa was even a probable cause of ill health, and only in 2 was dental treatment resisted. In Dr. Fairfield's opinion the most urgent health measure needed in the country was increase in facilities for dental treatment of the whole nation. As to constipation, it was curious that those who suffered from constipation were nearly all large fruit-eaters; it seemed to her that among many town dwellers the consumption of vegetables was decreasing while that of fruit was increasing, and that the change was not advantageous from the point of view of intestinal stasis. Mild enteroptosis was often to be seen where the diet did not appear to be faulty, but the improvement in physical training of girls was doing much to combat this abdominal flabbiness. The chronic dyspeptic cases seemed to be diminishing. As to diseases which might be termed "occupation diseases," laryngitis with no obvious lesion was common among teachers; excision of tonsils in quite elderly people might help this condition. Exophthalmic goitre, although not common, was very serious when it occurred among teachers; teaching would seem to be the worst kind of occupation for sufferers from this condition. They should be advised to seek other occupations, since they were ill suited to cope with children. A group of cases in which a large discrepancy between men and women was apparent on the surface was that of anaemia and debility. The evidence of medical certificates would suggest that it was three times as common among women, but when these cases were carefully investigated the typical signs of anaemia appeared to be absent, and it was probable that this term was used loosely in giving certificates for short absences. As to the diseases peculiar to women, in Dr. Fairfield's experience the phobia of the menopause was much more serious than the menopause itself. Only 11 cases of ill health among the 900 cases were found on investigation to be really due to the menopause, though many cases were attributed to it, in one instance over a period of eight years. Functional nervous disease was commoner in women than in men, the proportion being 4 to 3. The severity of an alleged cause for functional nervous disease appeared to be in inverse ratio to the severity of the disease. In her opinion the general practitioner should treat these cases, being in a position to know the circumstances and surroundings of the patient.

Dr. ELEANOR LOWRY suggested that the occupational laryngitis might be caused by bad voice production, sinus trouble, or excessive smoking. Dr. JUSTINA WILSON, from her experience at the National Hospital for Diseases of the Heart, confirmed the much greater incidence of rheumatic heart disease in women. Heart disease following influenza appeared to be very deadly to the heart muscle. Dr. MARY KIDD agreed that vegetables rather than fruit were needed to prevent constipation. It was unfortunate that vegetables were so expensive nowadays, and also that considerable time had to be spent in cleaning and cooking them, which the woman worker living alone could ill afford. Dr. RUTH VERNEY deplored the lack of cheap institutions for cases of functional nervous disease, since many such patients could only be treated away from the home circumstances which had contributed to the breakdown. Dr. MINA DOBBIE said that practitioners ought to inquire how working women spent their leisure and holidays. Often it was found that they looked after aged relatives from a sense of duty, and were quite grateful to practitioners who forbade them to do so. Dr. ROBERTS suggested that a possible cause of neurosis in elderly teachers was a sense of failure in not having advanced further in their profession and a lack of anything to look forward to. Dr. PEAKE pointed out that the effects of the menopause might not be immediate—for example, flushings could occur long after the actual cessation of menstruation. Dr. A. SHEPPARD pointed out that in some banks the compulsory retiring age for women was as early as 45. The PRESIDENT pointed out that the other duties outside work performed by most professional women would account for some of the excess of functional nervous disease. Neurasthenia, in her opinion, was always the result of emotional overstrain. There was a need for well run nursing homes in psychological institutions where the practitioner could continue to treat the patient.

Reviews.

PANEL PRACTICE.

THE author of this small book, *On the Panel: General Practice as a Career*,[1] is a panel doctor who, for obvious reasons, prefers to remain anonymous, and who, we are told, is a country practitioner with a panel list of about 2,500 insured persons and a private practice worked by himself and a partner. The early part of the book deals with the general management of a panel practice. A typical day's work of a country panel practitioner is described in detail, including surgery attendances and visits, and many common-sense hints are given on how to manage patients so as to gain their confidence. Great stress is laid on the necessity for careful examination and the desirability of obtaining a second opinion whenever there is doubt about diagnosis; in this connexion the author states that he often finds himself at a loss owing to the absence of any provision for free consultant advice. He is evidently one of the great number of insurance practitioners who treat their panel patients as conscientiously and as carefully as their private patients. He finds that 2,500 panel patients in addition to private patients are as many as he and his partner can attend to properly, and adds that he "does not advise anyone to go in for panel practice unless he has really good health." In common with most insurance practitioners, he often finds difficulty in the giving of certificates of incapacity, and laments the absence of an authoritative definition of "fitness for work" and "fitness for light work only." The Ministry of Health memorandum on the term "incapable of work," which is quoted in full, was not, he thinks, written with sufficient care.

It is clear throughout the book that the author has formed a high opinion of the advantages conferred on the working classes by national insurance, the chief being the facility for obtaining medical treatment whenever required; the uninsured population, apart from the wealthy classes, suffer enormously, he considers, through their inability to pay for medical attendance. He strongly advises the extension of medical benefit to the wives and children of the insured. Under medical benefit he would also include consultant and specialist treatment and hospital treatment; he calculates, however, that the cost would be almost prohibitive, and suggests that the approved societies might pay part and the patients the rest. The difficulties in the way of this are not overlooked, and there is something to be said in favour of the suggestion for cottage hospitals, where needed, at which general practitioners, including those on the panel, may become proficient in various specialisms. Here again the question of cost arises, and with the extension of the benefits to nearly three times the number of the present insured the increased demand for the services of the doctors, already overworked, can, he thinks, only be surmounted when preventive medicine has materially reduced the general sickness rate. A great part of the book is taken up with the discussion of questions like these, which are perhaps as much political as medical.

The book can be recommended as a practical guide, full of homely advice, for medical men commencing general, and especially panel, practice, while those parts that deal with the scope of national health insurance are evidently the outcome of personal experience and deserving of careful consideration.

[1] *On the Panel: General Practice as a Career.* By a Panel Doctor. With a Foreword by Dr. C. M. Wilson. London: Faber and Gwyer, Ltd. 1926. (Cr. 8vo, pp. viii + 294. 6s. net.)

properties of this substance have been worked out by Dale; it is found to be produced at the bowel, the lungs, and the liver, and is coming to be regarded as a normal metabolite. In the minute concentration of 1 in 30,000 histamine pricked into the skin produces the same triple reaction as mechanical injury. This evidence suggests that there is a fundamental and common cause at work, and it can be shown that this common factor is the presence of a diffusible substance in skin—histamine introduced on the one hand, and on the other a diffusible substance released in the skin by the mechanical injury and having a histamine-like action on the vessels and nerves. The evidence for this release of a diffusible substance by mechanical injury depends on showing that certain phenomena of the histamine reaction, which can only be interpreted as due to the presence of histamine in the skin, are exactly reproduced in the stroke reaction. Thus, for example, if the skin is stroked with the circulation arrested, the red line remains so long as the circulation is arrested and the local reaction is all the time increasing in breadth. If the circulation is not arrested then the red line fades slowly. Histamine produces identical phenomena, and in this case their meaning is clear—the histamine is diffusing out from the site of puncture. The clear correspondence of the course of events in the two cases is evidence that when the skin is stroked some diffusible substance is released. In similar manner it can be shown that the surrounding flush and formation of oedema in the stroke reaction also depend on this release of a diffusible substance in the skin.

This triple reaction, however, can be produced, not only by stroking and by the introduction of histamine, but also in a variety of other ways. It is produced by cold or freezing, by burning heat, the galvanic current, by ultra-violet light, by the application of such chemicals as hydrochloric acid, sodium hydrate, morphine, atropine, mustard oil, cantharidin, and many others. It is also produced by peptone and by antigen in those patients with hypersusceptibility to the protein concerned. Again, it is held that a common factor is at work; one property is common to all these stimuli—they produce tissue damage and by their action release a substance, identical in all cases, which sets in motion the mechanism of the triple reaction. At the moment it is not justifiable to say that this substance is histamine, but it is histamine-like.

These observations warrant the formulation of a more general law that every form of injury to the skin reaching a certain grade of severity calls forth a series of nervous and vascular reactions dependent on the same fundamental and natural chemical stimulus; in other words, there exists in the skin a single mechanism of defence against injuries of all kinds. Further, histamine pricked into the skin produces this triple reaction; introduced in greater quantity into the circulation it results in histamine shock. Slight injuries of all kinds produce this triple reaction; more severe injuries result in conditions closely akin to histamine shock—for example, wound shock and burn shock. There is a whole series of gradual transitions from the small daily injuries which pass almost unnoticed to the state of severe shock. The differences are quantitative, not qualitative; the defence mechanism, if excessive, is deleterious. It is another aspect of the conflict between the cell as an individual and the well-being of the body as a whole.

In the investigation of the action of heat and cold on the vessels of the skin numerous other points of interest arise, and special apparatus has been devised for applying these physical agents to the skin, and for registering the temperatures attained at the skin surface and subcutaneously. It is found, for example, that though the real freezing point of skin is probably very nearly that of normal saline (−0.6° C.) yet the highest temperature at which the skin has been frozen is −2.2° C., and at this temperature it is not easily done; it is difficult enough at −10° or −15° C. At −20° C. on some occasions freezing has not occurred—this is presumably the phenomenon of supercooling well known to physicists. Certain factors predispose to supercooling, chiefly the relative moistness of the skin and its content of grease. It is a factor of importance in considering why Arctic explorers may frequently be exposed to winds of −20° or −30° C. without invariably suffering frost-bite—the skin is naturally protected by supercooling, a protection enhanced by the grease which remains on the skin from lack of facilities for washing.

Finally, it has been shown that histamine punctured into the skin causes the production of a wheal, but if the circulation be arrested before the introduction of histamine and the arrest be maintained for fifteen minutes there is no whealing or only very slight whealing after the release of the circulation. If the circulation is released after only five minutes' occlusion whealing is full: the period of occlusion required for the prevention of whealing is shortened if the skin is warmed and prolonged if the skin is cooled. The failure to wheal is due to the loss of the increased permeability of the vessels first developed; it is not the result of the absence of histamine, as fresh histamine may be put into the spot which has failed to wheal after fifteen minutes' occlusion and still no wheal appears. To this phenomenon the term "refractoriness" has been applied. Refractoriness may be demonstrated, not only after the introduction of histamine, but in several other ways—for example, in those subjects who wheal readily on stroking the skin. By similarly maintaining circulatory arrest the development of a wheal over the line of stroke may be prevented, though the red line develops, and, moreover, histamine punctured into this red line fails to produce a wheal. Again, if a wheal is produced by freezing or by ultra-violet light and allowed to subside, the damaged area is found to be refractory to stimulation in this sense. Recovery from refractoriness in these last cases is gradual, extending over days. The refractoriness refers to the phenomenon of permeability alone, but, in addition, the vessels in a refractory area have lost their power to contract, for example, to adrenaline and pituitrin; there is no evidence, however, that refractoriness and the unresponsiveness to adrenaline and pituitrin are the same phenomenon.

Refractoriness and unresponsiveness of the skin vessels to pituitrin and adrenaline are both found in a variety of clinical conditions. Thus, if the skin of the red reticulum seen in erythema *ab igne* be tested, the vessels fail entirely, or almost entirely, to react to histamine, and with adrenaline there is no blanching, or very little. The same phenomena are displayed by the vessels of the telangiectasis resulting from exposure to *x* rays, etc., of the port-wine stain, and of the skin of the faces of those who have long been exposed to the weather. As to the cause of refractoriness, no complete explanation is yet possible.

Reports of Societies.

HEALTH OF THE PROFESSIONAL WOMAN.

AT a meeting of the London Association of the Medical Women's Federation, held on June 8th at the House of the British Medical Association, with Dr. CHRISTINE MURRELL, President, in the chair, Dr. LETITIA FAIRFIELD gave an address on the health of the professional woman.

Dr. Fairfield said that excessive sickness among women compared with men was a recognized feature of all statistical tables; especially between the ages of 45 and 65 the female morbidity rate was much higher than the male rate, though the female death rate was lower. This excess of sickness gave some grounds for differences in pay where work was equal, and it was therefore important to analyse its causes. The health of professional women was less easy to investigate than that of the working classes, but in the speaker's work for the London County Council she had been able to survey a wide range of cases and to make some interesting comparisons between men and women of the teaching profession. The rules of the L.C.C. were that every teacher away for more than three days had to have a certificate from her own doctor. If the absence lasted more than a month the case was referred to a Council medical officer, and the teacher was asked to see the medical officer with reference to sick leave. In cases of absence due to debility, headache, or neurosis action was taken after more than three days' absence. Dr. Fairfield's

TUBERCULOSIS IN GERMANY.

THE first of two volumes of a handbook[4] on the care of the tuberculous has reached us. It is a collection of articles by different authors on the tuberculosis problem, edited by Dr. KARL H. BLÜMEL of Halle. Ranging over a wide field, its keynote is the administration and organization of treatment centres. More than a hundred pages are devoted to the legal aspects of the disease, to the duty of the doctor to his patient and the State, to the punishments that await his folly or recalcitrance, and to the question of notification.

One of the most valuable contributions is the chapter on statistics. Unfortunately, owing to the lack of compulsory notification of tuberculosis in Germany, these are confined to the mortality figures, but in these alone and in their comparison with the figures of other nations is to be found most interesting matter for reflection. During the war the deaths from all forms of tuberculosis rose considerably, reaching their highest point in 1918, when 2.3 deaths per 1,000 living occurred. In 1921 the mortality rate had fallen to 1.37 per 1,000, but during the following years it rose slightly. These figures must be considered in relation to the change in the distribution of the numbers in the different age groups. Thus the proportion of children in the 0-5 age group in 1919 was under half that in 1910, whereas the proportion of the population in the age groups between 30 and 70 had risen considerably. It is interesting to note that there is no relation between the tuberculosis mortality and the total mortality from all causes; that in many States the mortality amongst females is higher than amongst males; that the mortality in the large towns is less than in the towns of medium size, and that in 1921 9.4 per cent. of all deaths amongst males and 10.2 per cent. amongst females were due to tuberculosis.

The latter part of this volume deals chiefly with occupational tuberculosis, tuberculosis in children, and differential diagnosis. The book is full of information, and should appeal to historians, medical statisticians, and clinicians alike.

GALLIPOLI.

A FEW years ago someone said of Gallipoli that it would go down to history as a disgrace to British statesmanship and British strategy; and the late Walter H. Page described it as "a horrible tragedy, where the best soldiers in the world were sacrificed to politicians' policies."

Sir GERALD ELLISON, in his *Perils of Amateur Strategy*,[5] exposes the circumstances which led to so trenchant an indictment of what, apart from politics and strategy, brought out, at the expense of thousands of lives and infinite suffering, the finest and most heroic qualities of the fighting forces of the British Empire.

The amateur strategy which he attacks was the decision of the Cabinet, at the instigation of the then First Lord of the Admiralty, to undertake an expedition against the Dardanelles fortress, an undertaking which naval and military experts had previously regarded as bound to fail. There is a prefatory note by Lord Esher, but it should be read after and not before the rest of the book. He disagrees with General Ellison's main argument, but accepts his conclusions. He defends Mr. Churchill against the accusation of being an amateur strategist. It is difficult, however, after reading what General Ellison has to say, to avoid the feeling that the whole conception and launching of the expedition, with its lack of secrecy and, consequently, of the element of surprise, savours strongly of amateur strategy.

The principle that strategy begins where politics ends has been laid down by the authorities on war from time immemorial; and it was this principle which was ignored. Mr. Churchill's own words illustrate this. In his book *The World Crisis* he writes that "the distinction between politics and strategy diminishes as the point of view is raised. At the summit true politics and strategy are one." General Ellison's comments on this are: "ergo, quite obviously, the politician is fully qualified to deal with strategy. Hence amateur strategy! Hence Gallipoli!" These words express in a nutshell what he endeavours to expose in the pages of his book.

Within three months of war being declared, a War Council, of which the Chief of the Imperial General Staff was not a member, eclipsed and swept away the original conception of a General Staff. We are told that the system, by which politicians have the power to interfere with strategy, still exists and may lead to disasters similar to that of Gallipoli unless a new system of strategical control is adopted. General Ellison's proposal is that the Committee of Imperial Defence should have two distinct sections—a policy section and an operations section, the latter formed of the chiefs of the staff of the three fighting services.

If such a solution, for avoiding the perils of amateur strategy, is realized, it is to be hoped that due regard will be paid in the operations section to the medical aspects of a campaign; for neglect of these may prove as perilous to the nation as amateur strategy. There was at one time a medical section in the directorate of military operations; and history records how valuable it was in connexion with preparation for war between 1906 and 1914. We may ask why it has not been resuscitated since the war.

There is much food for thought in General Ellison's book. It will no doubt arouse a considerable amount of criticism and controversy, which the medical services will follow with interest. What they desire most, and would welcome whole-heartedly, is that due consideration should be given to the medical aspects of a campaign in determining its strategy.

NOTES ON BOOKS.

MR. BORRADAILE'S *Manual of Elementary Zoology* has now reached its fifth edition,[6] and considerable parts of the introductory chapter and of those dealing with reproduction and sex, and the relation of animals to the world, have been rewritten. We reviewed the third edition on October 30th, 1920 (p. 668), and it only remains to call attention to the comprehensiveness of a very valuable book which aims at providing information for medical students.

The volume of *Collected Papers by the Staff of the Henry Ford Hospital*[7] in Detroit, Michigan, represents the scientific writings by the members of the hospital staff since its foundation in 1915 down to the end of September, 1925; the majority of the papers have appeared during the past two years. One appendix is devoted to a short account of the history and equipment of the hospital, and articles dealing with technical appliances are grouped in a second appendix.

"Les Petits Précis"[8] is a series of small books edited by Dr. A. CANTONNET, the object of which is to supply the French medical student and practitioner with the indispensable minimum of knowledge in each specialty in medicine. Thus in Dr. Paul Halbron's book on infectious diseases in fewer than two hundred pages an up-to-date but inevitably fragmentary account is given of thirty-two diseases, including not only the common acute infectious diseases prevalent in Europe but also plague, cholera, dengue, sleeping sickness, and pappataci fever. A list of the diseases notifiable in France is appended. Other volumes of the series of fifty-four which have reached us are *Tuberculoses ostéo-articulaires et ganglionnaires*, by Drs. E. SORREL and A. DELAHAYE; *Grossesse et Accouchement Pathologiques*, by Dr. J. LEMELAND; *La chirurgie infantile*, by Dr. A. MARTIN; *Le Cancer*, by Dr. G. JEANNENEY; *Oto-rhino-laryngologie*, by Dr. L. BALDENWECK; *Rayons x et corps radio-actifs*, by Dr. A. LAQUERRIÈRE; *Examens de laboratoire*, by Dr. A. BEAUVY; and *Dermatologie du Praticien*, by Drs. G. LACAPÈRE and H. MONTLAUR. The books are of handy size, small and light, so that it is easy to carry one about in the pocket for

[4] *Handbuch der Tuberkulose-Fürsorge.* Erster Band. Herausgegeben von Dr. Karl Heinz Blümel. München: J. F. Lehmann. 1926. (Roy. 8vo, pp. viii + 457; 46 figures on plates, 51 figures in the text. M.24; bound, M.27.)

[5] *The Perils of Amateur Strategy, as exemplified by the attack on the Dardanelles Fortress in 1915.* By Lieut.-General Sir Gerald Ellison, K.C.B., K.C.M.G. London: Longmans, Green and Co., Ltd. 1925. (Cr. 8vo, pp. xxvi + 152; 2 maps. 5s. net.)

[6] *A Manual of Elementary Zoology.* By L. A. Borradaile, Sc.D. Fifth edition. Oxford Medical Publications. London: H. Milford, Oxford University Press. 1926. (Cr. 8vo, pp. xvi + 670; 468 figures. 15s. net.)

[7] *Collected Papers by the Staff of the Henry Ford Hospital.* First series, 1915-25. New York: P. B. Hoeber, Inc. 1925. (Med. 8vo, pp. xxi + 634; illustrated. 8 dollars net.)

[8] "Les Petits Précis." Bibliothèque dirigée par A. Cantonnet. Paris: A. Maloine et Fils. 1925 and 1926. (4½ × 6¼; illustrated. 8.50 fr. each volume.)

THE THYROID GLAND.

THE Beaumont Foundation Lectureship Committee of the Wayne County Medical Society has been fortunate in securing two such authorities as CHARLES H. MAYO and H. W. PLUMMER to lecture on *The Thyroid Gland*,[2] for at the Mayo Clinic during the period 1892-1925 there have been 14,505 cases of adenomatous goitre and 8,223 of exophthalmic goitre, and during the year 1924 the total number of cases of goitre, simple and exophthalmic, submitted to operation was 1,785, with a mortality of 10, or 0.58 per cent. Of the two parts of this pamphlet, which is rather highly priced, the first, of a general introductory character, dealing with the anatomy and physiology of the thyroid, the etiology and distribution of goitre, the metabolism in exophthalmic goitre, and a few pages on the parathyroids, is by Dr. Charles Mayo. In the second part, headed "The function of the thyroid," Professor Plummer states that this is to maintain 14 mg. of thyroxine in the body, or to elaborate 0.33 mg. of thyroxine daily; he classifies goitre as exophthalmic and as endemic, the latter being divided into diffuse colloid and adenomatous, and the adenomatous again into those with and those without hyperfunction. The view expressed is that the most essential factor in the etiology of endemic goitre is a relative or absolute deficiency in iodine; this leads to hypothyroidism in the first instance, and then stimulation of the thyroid produces diffuse hypertrophy and colloid is stored in excess.

It is maintained that in many cases continued stimulation of the thyroid combined with unknown factors results in adenomatous formation, and that relatively late in the history of the thyroid changes this adenomatous tissue becomes excessively active. Of adenomatous goitres removed from patients under 30 years of age 5 per cent. were functionally overactive, while, in patients over 60, 60 per cent. were in this state. Colloid goitres, it is stated, can be rapidly diminished when thyroid is administered; Professor Plummer believes that when given to patients with adenomatous goitre iodine may initiate hyperthyroidism. In considering the relation between the two, the manifestations of an excessively functionally active adenoma are said to be reducible to physiological terms, whereas those of exophthalmic goitre cannot. In 1912 Plummer suggested that in hyperfunctioning adenomatous thyroids (toxic goitre) there is merely an excess of thyroid secretion, whereas in exophthalmic goitre there is in addition an abnormal secretion with a special affinity for nervous tissues; later he thought that there might be a third toxic agent causing exophthalmos and ocular symptoms. Remarkable and rapidly beneficial results obtained by administration of Lugol's solution in exophthalmic goitre are described, and the appropriate dose discussed. The operative mortality of exophthalmic goitre was reduced by the Lugol treatment from 3.5 to 1 per cent. For these reasons alone it is worth while for every practitioner to read this compact lecture.

PLASTIC SURGERY OF THE NOSE.

AT a time when plastic surgery is making such rapid advances and the literature of the subject is becoming more and more extensive, *Plastic Surgery of the Nose*,[3] by Dr. J. EASTMAN SHEEHAN of New York, is welcome in that it represents an attempt to treat in detail a single branch of the work.

The introduction, which is excellent, contains arguments for the recognition of procedures for the repair of nasal disfigurements as belonging to dignified surgical practice, and emphasizes the necessity for specialization in this delicate type of surgical work. We cannot accept the opinion that an external central columellar incision is the best for practically all plastic procedures on the nose. Most patients object—quite justifiably—to a nasal operation which leaves any external scar, and it is not encouraging to be informed that "even a bad scar, so placed, can readily be eliminated." The edges of such an incision—necessarily limited in length—are very liable to be damaged by the extensive manipulations carried out through it; the scar is frequently bad, and even a good columellar scar is usually very visible. Stress is laid on the disastrous results of paraffin injection for contour correction. Cartilage is advocated in preference to bone or artificial material for the restoration of the nasal bridge: the arguments in its favour are well known.

A useful chapter describing the anatomy of the nose is followed by an exhaustive list of the conditions for which surgical intervention may be indicated. Preparation of the patient is dealt with in considerable detail; the strenuous local treatment advocated seems to us excessive, for by irritating the delicate lining of the nose it is likely to defeat its own object. Reduction of a hump-nose is taken as a typical operation for description. The hairpin retractors and the angulated knife used are worthy of note. Special methods of bandaging and various means of minimizing oedema and bruising are discussed at length. Infection is mentioned, and it is admitted that the columellar incision may require opening for drainage purposes. The advantages of an intranasal incision in such a contingency are here again made obvious. It is better to dispense with the special pads and bandages recommended for maintaining correction after operations undertaken for straightening the crooked nose. If the operation has been sufficiently radical any tendency to displacement of the corrected bridge line can be readily corrected by painless digital manipulation from day to day as the bones are resetting; external appliances are very liable to become deranged and to maintain rather than correct displacement. It is difficult to understand how small sections of the lateral cartilages of the nose are removed with the precision described when the incision is made so far away from them. For depression of the nasal bridge a hinged cartilage graft—well known in this country as the Gillies method—is advocated. Dr. Sheehan recommends fixation of the columellar portion of the graft by a catgut suture.

The instructions for dealing with a variety of conditions ranging from "protrusion of the septum" to "twisted tip" are rather scanty and indefinite; operations on these deformities are among the most difficult of all plastic procedures. Such sentences as "The mesial crus is partially excised towards its middle, and excisions are made from the lateral crus if the conditions and the plan of repair call for such excision" do not guide the operator very far. The usual type of submucous resection for deflected septum is described—but why should it be made through the external columellar incision when the usual intranasal route gives such excellent access and results? In the chapter on deformities of the alae the instructions are again scanty and difficult to follow, but an ingenious method of cartilage grafting of the maxillae for the correction of "dish-face" is well worthy of note.

Rhinophyma, paraffinoma, recent injuries, the syphilitic nose, various methods of rhinoplasty, methods of skin grafting, forms of skin flap, and "occasional disfigurements" are fully dealt with. The necessity for and the means of supplying lost lining in dealing with syphilitic affections of the nose are discussed, and acknowledgement is made of the pioneer work of Gillies on this subject. In planning flaps for complete rhinoplasty the author appears to be a little optimistic about the depth of hair-free skin available on the average forehead, for it is difficult to understand how the flaps pictured as taken from the central portion of the forehead in a vertical direction manage, when turned down, to reach the tip of the new nose and, in some cases, even to form a new columella. The appendix on anaesthesia overlooks the chief advantage of the two-tube form of intratracheal anaesthesia (introduced into this country by Magill) which lies in the ability to pack off the pharynx completely without interfering with either the inspiratory or expiratory airway.

The volume is well printed and beautifully and lavishly illustrated.

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[2] *The Thyroid Gland.* By Professor Charles H. Mayo, M.D., and Professor Henry W. Plummer, M.D. Beaumont Foundation Annual Lecture Course, IV. London: Henry Kimpton. 1926. (6¼×9½, pp. 83. 8s. 6d.net.)

[3] *Plastic Surgery of the Nose.* By J. Eastman Sheehan, M.D., F.A.C.S. With a Foreword by John F. Erdmann, M.D., F.A.C.S. New York: P. B. Hoeber, Inc. 1925. (8 × 10½, pp. xix + 249; 177 figures. 10 dollars net.)

summer, even in Scotland. Dr. W. B. KNOBEL, divisional medical officer, London County Council, said that in London no child was kept waiting a single day for treatment of surgical tuberculosis, but the County Council had difficulty in getting cases at an early stage. Professor Sir ROBERT PHILIP said that this form of the disease was not confined to the poor; non-pulmonary tuberculosis prevailed all over the world among the high and the low, and many of the richest and noblest families had been afflicted by it. The nature of the disease made treatment difficult.

The Tuberculosis Dispensary.

At the afternoon session, "The actual place and function of the tuberculosis dispensary in the tuberculosis scheme" was treated in a paper by Sir ROBERT PHILIP, which is given in full at page 55 of this issue. Dr. LISSANT COX, central tuberculosis officer, Lancashire County Council, who followed, said that the tuberculosis dispensary system, which was to-day in operation, was a distinctive feature of British work, and was carried out by 350 tuberculosis officers; it earned unstinted foreign praise wherever the matter was studied. In the larger administrative areas the tuberculosis officer ought to be a specialist doing this work alone, and should not be employed on other public health work. The same thing might be achieved in the smaller areas if they would combine to provide a whole-time tuberculosis officer. It was necessary that each consultant tuberculosis officer should have a small laboratory at the chief dispensary for the area, with a trained laboratory worker attached; the officer should have his own *x*-ray apparatus and take his own skiagrams; this would enable him to follow his patients throughout their illness, and to build up his knowledge of *x*-ray appearances, so that he could correct and modify his opinions in the light of the development of the cases. While *x*-ray examinations should not take the place of other methods, they rendered the facilities for diagnosis better. In the past too much emphasis had been laid on treatment rather than on prevention, which was the real and ultimate goal. Much should be done by the dispensary in obtaining better notification of cases, and so reducing the chances of infection. Much also could be done by education, especially through the dispensary nurses; as the result of dispensary work in Lancashire the number of persons per 100,000 dying from consumption had fallen from 107 in 1918 to 67 in 1925. Dr. W. B. KNOBEL said that an important question was whether, under the dispensary organization, the greatest number of cases possible was being detected in the early stages of the disease. In spite of many years of working and propaganda, three-quarters of the cases were in a more or less advanced stage of the disease when they first came under these schemes. This was so serious a criticism that he considered it was a question whether the dispensaries were organized on the right lines, and he suggested that it was desirable that more reasonable propaganda, distinguishing between infective and non-infective cases, should be before the public. Dr. WILLIAM BRAND (Camberwell) said that there was a cry from the sanatoriums to give them early cases, and those who were in charge of the centres of diagnosis in the dispensaries must comply with this. With the full co-operation of the general practitioner in a district, the diagnosis of contacts might be greatly simplified. The dispensaries should not, however, attempt too much; their main function was the organization and supervision of home treatment of tuberculosis in each area. Dr. J. MCCALLUM LANG (Lanark) said that a classification of dispensary patients according to age and sex was of interest in assessing the value of dispensaries as a means of detecting tuberculous disease in its early stages. In the middle ward of Lanarkshire, with a population of 237,000 persons, mainly industrial but partly agricultural, 65 per cent. of the tuberculous cases were children under 15 years of age. More adolescents must be induced to present themselves at the dispensaries if the primary duty of procuring a diagnosis in the earliest detectable stages was to be accomplished. There was no age at which vaguely suspicious symptoms demanded more careful consideration than between 15 and 25 years. The dispensary played a valuable part also as a "clearing-house"; for, of all the patients who presented themselves for examination, only 44 per cent. were found to be tuberculous. The dispensary thus prevented the over-notification of tuberculosis, for he considered that in areas with no dispensary facilities many suspects were formally but wrongly notified as cases of tuberculosis. The educative function of the dispensary should also be kept well in view. The dispensary had, too, its part to play in the examination of contacts, but it should be remembered that this function was also discharged by the school medical service and by the national health insurance system.

Experimental Studies in Tuberculosis.

At the morning session on July 2nd a paper on experimental studies in tuberculosis with reference to the origin of pulmonary tuberculosis was read by Dr. C. H. BROWNING, professor of bacteriology in Glasgow University. The problem of pulmonary tuberculosis, he said, was the essential problem of tuberculosis in the adult. It must not be imagined that whenever the tubercle bacillus reached an individual the result was tuberculosis, for the chances were that in most cases nothing, or at least very little, would happen to the human host. The credit for throwing doubt on the early doctrine that inhalation was the sole cause of pulmonary tuberculosis belonged to the Norwegian physician Andvord. Though tuberculosis might be acquired by inhalation of infected material, it was by no means certain that it was the only method by which tuberculosis of the lungs arose. Tuberculosis in European countries might be described as an endemic disease—that was to say, it was continually smouldering; and it might be considered that the relatively chronic form in which pulmonary tuberculosis existed in the adult was probably to be attributed in great part to this smouldering fire of tuberculosis. Referring to laboratory experiments on mice, Professor Browning said that this animal was very suitable for investigation because, like the European population, it was relatively resistant and might go on for a year or two after tuberculosis infection had been imparted to it. Out of some 300 mice inoculated by way of the abdominal cavity, 7 or 8 per cent. showed at death massive pulmonary lesions due to tubercle bacilli and nothing else. In a feeding experiment the result was also very striking, for in 11 out of 20 animals which had received tubercle bacilli with their food pulmonary lesions of large size were the only evidences of tuberculous disease. There thus appeared to be an affinity between the tubercle bacillus and the lung, and it appeared from these experiments that the tubercle bacillus might reach the lung by other routes, leaving little or no trace of the path which it had pursued in entering the body. It must, therefore, be assumed that the origin of lung tuberculosis was to be summed up in the word "inhalation." In the present state of knowledge administrative measures devoted to the prevention of pulmonary tuberculosis must not be stereotyped, since it was not possible to say which of the various factors played the largest part in the production of the disease.

Treatment by Artificial Sunlight.

Dr. ALEXANDER SMITH (Robroyston Hospital, Glasgow) said that enthusiasm for the treatment of tuberculosis by artificial sunlight, as for any new therapeutic procedure, was apt to exaggerate its possibilities, but light irradiation could play a useful and important part in the treatment of tuberculosis. Heliotherapy was difficult to carry out in these islands because of the fitful appearances of the sun and the relatively weak actinic value of its rays coming from skies blotted out by clouds of smoke. The systematic treatment of tuberculosis by artificial sunlight had been commenced in Glasgow in January, 1925; two 75-ampere and three 20-ampere lamps, running at 70 volts of continuous current, were used. Treatment consisted of a general light bath, the patient being naked except for short pants. An initial exposure to the carbon arc lamp of twenty minutes was increased every fourth day by five minutes. With the tungsten arc a shorter exposure of about two minutes, gradually increased to twenty minutes, was sufficient. The duration of exposure to the mercury vapour lamp was also short—between two and four minutes, gradually increased. The intensity of the reaction produced varied considerably, and careful supervision of the

refreshing one's memory in a particular specialty. But the condensed style in which each subject is treated is not conducive to pleasure in reading. In several volumes there are quite good illustrations, some rather comic, as in the caveman drawing of the head of a person undergoing anterior rhinoscopy.

It demands a measure of courage amounting almost to temerity to write verse for children. There are two reasons: First, in the matter of substance, it is extremely difficult for even the most patient and sympathetic of us to find out what and how a child is thinking, and we have all of us forgotten. Secondly, in the matter of form such a title as *Child Verses and Poems*[9] compels comparison with Robert Louis Stevenson's *The Child's Garden of Verses*, a little masterpiece in form and substance. The medical writer who has just put out under a pseudonym the small volume, whose full title is quoted above, has the necessary sympathy, and sometimes the necessary simplicity, but sometimes spoils all by long words, though we will admit that "peppermint-drop" is not a really truly long word; it comes at the end of four stanzas on three gnomes, and was a suitable reward for their daring. In another piece are two happy couplets describing the disconcerting stare with which a young child examines a new acquaintance; they may be quoted as an example of the author at his best:

> "Some think because so long I stare
> I keep no thoughts behind my hair,
> But smile I will not as I should
> Unless I find them bright and good."

The drawings by Cecile Walton are also good. The book contains some other poems, and we commend it to all child lovers.

Caravanning,[10] by J. HARRIS STONE, with its numerous attractive illustrations and beguiling narrative, will tempt many a reader, hitherto a stranger to this form of recreation, to consider whether the present vogue of gathering in groups in fashionable resorts cannot be profitably replaced by a more romantic and healthy activity. The author's description of caravan life is full of practical detail; useful hints are given for almost all conceivable emergencies, and the restful leisure of a holiday spent in this way is very clearly indicated. The variety of caravans available is such as to meet all tastes and pockets.

The British Goat Society's Year Book for 1926[11] is the sixth issue of a popular and useful annual. A short account is given of the second International Goat Congress in Switzerland last September, when seventy delegates from ten different countries were present. A tabulated statement of the yield of milk of all the goat herds for the two previous years is reprinted by permission of the Minister of Agriculture and Fisheries and the Central Council for Milk Recording Societies; it indicates the steady extension of this industry in Great Britain. As in previous numbers of the *Year Book*, there is to be found in this issue a large variety of articles dealing with many aspects of practical goat-keeping and research in goat-breeding. The numerous illustrations are a pleasing feature of the volume, the practical value of which will commend it to all interested in goat-keeping.

[9] *Child Verses and Poems.* By Austin Priestman. Illustrated by Cecile Walton. London: A. H. Stockwell, Ltd. 1926. (Cr. 8vo, pp. 96; illustrated. 4s. net.)

[10] *Caravanning.* By J. Harris Stone, M.A.Cantab., F.L.S., F.C.S. Third edition. London: The Caravan Club of Great Britain and Ireland. 1926. (Demy 8vo, pp. 45; illustrated. 6d.; post free 7d.)

[11] *The British Goat Society's Year Book for 1926.* London: T. W. Palmer, 10, Lloyd's Avenue, E.C.3. (Demy 8vo, pp. 163; illustrated. 1s. 6d.)

PREPARATIONS AND APPLIANCES.

Vitreosil Spatula.

VITREOSIL is the name given to pure silica fused by an electric process in the works of the Thermal Syndicate, Ltd. The substance possesses great resistance to acids and heat, so great that it can be used, for working purposes, up to 1,100° C. or higher, and it is unaffected by any acids except hydrofluoric, and at a high temperature phosphoric. At high temperatures, also, caustic alkalis and certain metallic oxides affect it. Dr. J. Barker Smith (Herne Hill) has designed a small spatula of this material for the char test, for detecting sugar in urine, blood, tears, and other secretions (BRITISH MEDICAL JOURNAL, March 27th, 1926, p. 602). It is said that when the droplet of urine is evaporated, charred to a cinder, and the silica disc plunged hissing into water, rubbing with the finger-tip will leave a residue or "phantom char" when sugar is present. The procedure is also accompanied by an odour of caramel.

NATIONAL ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

THE twelfth annual conference of the National Association for the Prevention of Tuberculosis was held in Glasgow on July 1st, 2nd, and 3rd. The Hon. Sir ARTHUR STANLEY, G.B.E., presided at the various sessions of the conference. The delegates were welcomed by the Right Hon. Lord Provost Sir MATTHEW W. MONTGOMERY, LL.D., who spoke of the valuable and beneficent work which had already been done by the association.

Non-pulmonary Tuberculosis.

At the first session of the conference on July 1st, a discussion on the provision for the care of non-pulmonary tuberculosis was opened by Dr. A. S. M. MACGREGOR, medical officer of health for the city of Glasgow, and Mr. JAMES TAYLOR, consulting surgeon of the Glasgow Corporation hospitals and sanatoriums. Dr. MacGregor said that the field for the treatment of non-pulmonary forms of tuberculosis was as yet only partially covered, and the principal question at the present time was the form the facilities for treatment should take. A serious result of delayed treatment was the destruction of bone, which led to crippling and deformity. The excellence of the results obtained were impaired by the late arrival of patients in the institutions provided for treatment. Mr. James Taylor expressed the belief that the improvement of housing conditions and the provision of plenty of air and sunshine for the people as a whole, although it might entail great initial expenditure, would go a long way towards cutting down the sums that were yearly spent on the maintenance of tuberculosis hospitals. Dr. J. G. JOHNSTONE, medical superintendent of the Heatherwood Hospital, Ascot, quoted statistics to show that there was not sufficient bed accommodation or sufficient after-care organization throughout the country for treating non-pulmonary cases of tuberculosis. It was generally agreed, he said, that surgical tuberculosis, compared with the pulmonary type, was eminently arrestable. The records of most special hospitals dealing with these cases showed that 80 or 90 per cent. could be arrested. He had found, however, that only about 45 per cent. of cases applied for treatment at the hospital within one year of the appearance of the disease, while the remainder had suffered for a longer period, some of them for as much as seven or eight years. He was not to be taken as asserting that these patients had been totally without treatment during these years; as a rule, they had had some kind of treatment in a general hospital or at a tuberculosis dispensary, but their state on admission to hospital with the disease far advanced, and crippling deformities developed, was not at all satisfactory. The fact, too, that the surgeon, who treated in hospital a patient coming from a remote district, could not know the result did not make for progress in the treatment of the disease. After-care in such cases had to be continued for several years after in-patient treatment, but the shorter the period for which the disease had already lasted, the shorter also would be the period of treatment, and the better the end-result. Another aspect of the problem was the financial one. It was found that the average cost of arresting the disease in cases discharged from hospital was: for the spine £262, for the hip £309, and for the knee £198. It was hoped in the near future to institute, in connexion with the Heatherwood Hospital, a series of clinics in the metropolitan area and some of the home counties areas, and he thought this was an object deserving of the fullest sympathy and earnest endeavour. The Central Committee for the Care of Cripples had formulated a national scheme whereby each authority or group of authorities should institute a central hospital and a system of clinics in the outlying districts. Such hospitals should be staffed with a competent orthopaedic surgeon, trained sisters, and nurses specially trained in after-care methods. It was advisable also to effect a liaison with a general hospital, as it was often desirable to obtain the advice of members of other branches of the profession. Dr. J. H. PAUL (Millport) described in detail the work of a voluntary institution at Millport in Buteshire, which had proved that real open-air treatment was possible in winter as well as in

In the physiology department demonstrations were given of the isolated, beating heart of the frog and of the rabbit, and the spectroscopic appearance of the blood in different conditions. The anatomy department furnished anthropological demonstrations by Mr. J. H. Cobb and Dr. F. Barnes of the bones of primitive man and the crania and skeletons of various living races. Professor Patten showed some interesting exhibits from his ornithological collection, and models in the anatomical museum were exhibited by Dr. Eric Stacey.

The Medical School of Sheffield is much older than the University; it dates back to 1828, and is looking forward to celebrating its centenary two years hence. For this reason it has been content to occupy a somewhat less conspicuous place in the present celebrations than might otherwise have been the case.

SCOTTISH BOARD OF HEALTH.

ANNUAL REPORT FOR 1925.

THE annual report of the Scottish Board of Health for the year 1925, which has just been issued, contains some new features, dealing especially with pneumonia, venereal diseases, rickets, and the value of the "health week." The question of medical certification of incapacity for work under national health insurance also receives special treatment.

The total death rate for Scotland in 1925 was 13.4 per 1,000 persons living, which is 1.0 less than for 1924, and 1.4 less than the mean of the rates for the last ten years. The death rates from pulmonary and non-pulmonary tuberculosis are the lowest yet recorded. On the other hand, the common infectious diseases in the sixteen large towns show a slight increase in total incidence during 1925, although there was a decrease in the death rate from these causes per 1,000 persons living. The infantile mortality also appears to have been considerably lowered. The death rate of children under 1 year of age was 90.5 per 1,000 births during 1925, which was lower than that of any previous year, excepting 1921 and 1923. It is pointed out that this progressive decline in the infantile mortality does not yet represent the full saving in health and life of infants that might be effected. The report refers to the findings of the Hospital Services (Scotland) Committee, presented in January, 1926, and states that of the additional 3,500 beds for general hospital work which the committee considered were required 1,000 are needed for the insured population. With regard to the housing shortage, the report states that the number of houses completed with State assistance for the working classes during 1925 was over 8,000, and that while this was an advance on the figures for the two preceding years it was not so great as was expected. The number under construction on the last day of the year was 13,311, and it is therefore expected that during 1926 a greater number will be completed than in any year since local authorities undertook this matter. The Milk and Dairies (Scotland) Act, 1914, was put into operation on September 1st, 1925, along with the Tuberculosis Order, which will have the effect of eliminating the dairy cows that give tuberculous milk.

Housing.

The report states that a production of 20,000 houses a year is required in Scotland, and that it is regrettable that less than one-half this number have been finished during 1925. A conference of the larger local authorities was held in Edinburgh in July, 1925, at which the serious nature of the situation was discussed and a committee of local authorities appointed to investigate the causes of delay. A report issued in November, 1925, attributed the delay to the more stringent conditions of trade unions in Scotland and to the difficulty experienced by local authorities in borrowing money for housing purposes, as well as to a shortage of building trade labour. In December the Prime Minister announced that the Government had resolved itself to erect in Scotland 2,000 houses of the steel type, which did not require in their production and erection more than 10 per cent. of skilled building trade labour, and at the close of the year active steps were being taken to put this scheme into operation. At the same time, the promotion of schemes by ordinary methods of construction was being pushed forward. On December 31st there were 63,937 houses completed, in course of erection, or immediately contemplated with the aid of the Government subsidies. Returns furnished by local authorities showed that 1,852 houses had been erected by unassisted private enterprise during 1925. A special grant had been made by the Treasury to enable local authorities to erect a small number of houses in different parts of the country for the purpose of demonstrating the value of steel houses, and in all twenty-four demonstration houses of the Weir and Atholl types had been allocated for this purpose. Local authorities had in all cases reported that the tenants had been perfectly satisfied with the comfort of steel houses, which were quite cool in the summer months and warm in the winter, little or no difference being presented between the steel house and the stone or brick house. Some difficulty had been experienced in regard to the housing of farm workers. Excepting to the extent that such workers might occupy houses provided by local authorities in villages adjoining the farms, it had not been practicable to provide houses for them through the agency of the local authorities. It had been urged from time to time that grants should be made available to owners of property in rural areas towards the cost of improvement and repairs in existing houses, as this would be a more economical method of providing suitable accommodation than the erection of new houses, and this proposal had engaged attention during the year. With regard to slum clearance during the year, the Board of Health had confirmed five improvement schemes and one reconstruction scheme in the burghs of Buckhaven, Dunbar, Dundee, Leith, Leven, and Perth. With the assistance of the slum clearance grant, thirty-six local authorities were proceeding with schemes which involved the closure of 7,904 houses, to replace which 7,450 houses were being constructed. It is pointed out that considerable difficulty is found in rehousing the tenants from insanitary areas, as tenants are often unwilling to remove to the new houses provided for them, despite the fact that the new rents are often lower than those previously paid.

Venereal Diseases.

During the year 1925 the number of venereal treatment centres had been increased to forty-five. With regard to syphilis, it is stated that if a case is treated before the parasites have become generally diffused through the body, and if treatment is vigorously carried out, a cure may be anticipated with confidence; that in the next stage, while a cure is still to be expected, the success of treatment cannot be promised with the same assurance, and the duration of treatment is more protracted, although immediate palliative results are the rule. The most important feature in treatment is, therefore, that it should be commenced at the earliest possible date. It is pointed out that the use of mercury as a remedy has not been displaced by the introduction of arsenobenzol products, but that of recent years bismuth has, to a considerable extent, replaced the use of mercury compounds, while potassium iodide in certain circumstances is still found to achieve results that cannot be produced by any other preparation. The accepted standard of cure is that the blood of the patient must give negative responses to Wassermann tests for a period of two years.

In the treatment of acute anterior gonorrhoeal urethritis irrigation by warm solution of suitable antiseptic conveyed by means of a siphon is recommended. The antiseptic preparations mentioned are potassium permanganate (1 in 8,000 to 1 in 4,000), zinc sulphocarbolate (1 in 4,000), mercury oxycyanide (1 in 4,000), silver nitrate, and mercurochrome. The report states that the value of treatment by vaccines is still in doubt. It is believed that between 35,000 and 70,000 new cases of gonorrhoea occur in Scotland annually, and that a large proportion of them receive no satisfactory treatment. It is believed further that, of all the grave maladies, none has been more neglected and none has had its dangers less clearly realized.

treatment was therefore necessary. Protection of the eyes was also very necessary, because intense conjunctivitis sometimes developed eight or ten hours after the exposure, often during the night; it subsided, however, in a day or so, leaving no traces. Many cases of gland lesions had been treated, some of them complicated by ulcers and sinuses, and in all improvement had rapidly resulted. Over fifty cases of bone and joint tuberculosis had been treated, with excellent results; not only chronic sinuses healed, but in many cases there had been restoration of mobility and function in the joint, and *x*-ray plates had shown a return to normal of the bony structure. Cases of visceral tuberculosis required careful selection and constant supervision during treatment because a violent focal reaction, with increase of pulse rate and elevation of temperature, sometimes resulted. Cases of tabes mesenterica were often greatly benefited, and sometimes large palpable gland masses diminished steadily under artificial sunlight treatment. Pulmonary tuberculosis had been treated in twenty patients, and though an increase of pulse rate had sometimes been noticed no ill results had followed, and practically all the cases had gained weight. He thought that in early cases great benefit might be derived from the tonic effects of the light.

The Smoke Problem.

Ex-Baillie W. BROWNHILL SMITH, O.B.E., described the attempts made by the Glasgow gas department to introduce the use of gas for commercial heating and to provide smokeless fuel for the use of the citizens.

Inspections and Demonstrations.

On the afternoon of July 2nd visits were paid to corporation housing schemes, hospitals, and sanatoriums, and on July 3rd a demonstration was given by Dr. FERGUS L. HENDERSON of radiograms of the chest in tuberculosis and allied conditions, and various sanatoriums and dispensaries devoted to work in connexion with tuberculosis were visited.

Annual Meeting.

At the twenty-seventh general meeting of the National Association for the Prevention of Tuberculosis held at the close of the afternoon session of the conference on July 1st the annual report was adopted, on the motion of the Hon. Sir ARTHUR STANLEY, who was in the chair, seconded by Sir ROBERT PHILIP. The chairman referred to the special appeal about to be made to raise £100,000 for a three years' intensive campaign of popular education regarding the cause and prevention of the disease and for rendering communal and individual aid and making provision for the after-care of patients. In the evening a reception was held by the Corporation in the City Chambers, at which Lord Provost Sir Matthew W. Montgomery and the magistrates received the guests, and addresses were given in the banqueting hall.

TWENTY-FIRST ANNIVERSARY OF THE UNIVERSITY OF SHEFFIELD.

ON July 1st and 2nd the University of Sheffield celebrated its coming of age. King Edward VII opened the University in 1905, and the present celebrations were attended by Princess Mary. Glorious summer weather prevailed, and the thinning of the customary veil of smoke gave the city a strangely unfamiliar appearance, and justified the remark in a local paper, that Sheffield was one of Nature's beauty spots spoiled by being converted into an industrial city.

The University buildings are pleasantly situated on the lower slopes of Weston Park. In the park, a stone's throw from the entrance to the University, is the beautiful war memorial erected to the memory of the 8,814 non-commissioned officers and men of the York and Lancaster regiment who fell in the war. July 1st, the anniversary of the opening of the battle of the Somme, is the day of Sheffield's saddest memories; ten years ago a battalion recruited in this city was almost obliterated at Serre. An undertone of sadness mingled, therefore, with the dominant chord of congratulation and jubilation. The ceremonial programme included the unveiling by the Chancellor of a war memorial in the University Library to the students who gave their lives in the war, and the laying of the foundation stone of a new sports pavilion on the University playing fields at Norton, given by a former Pro-Chancellor, the late Sir Albert Hobson, as a memorial to his two sons.

On Thursday morning, July 1st, the representatives of learned societies and other bodies were welcomed in the Firth Hall of the University by the Chancellor, the Marquess of Crewe, British Ambassador to France, and by the Vice-Chancellor, Sir Henry Hadow. The gathering was a most distinguished and brilliant one, and emphasized, as so many gatherings in recent years have done, the unification, geographically speaking, of the whole world. Saskatoon, Hong-Kong, Calcutta, Capetown, as well as many other distant places, sent delegates, and the University of Paris honoured Sheffield by sending representatives. The university spirit is evidently one of the factors contributing towards the evolution of the international—and inter-racial—mind. Sir Walter Fletcher represented the Medical Research Council, Professor J. S. Haldane was one of the delegates from Oxford University, and Dr. J. G. Adami came from the University of Liverpool.

Professor Bower, who represented the Royal Society, referred in his speech to the valuable influence of universities in great industrial cities, such as Sheffield, Manchester, Leeds, Liverpool, and Birmingham, in endowing their citizens with a wider outlook and the corporate spirit. The Marquess of Crewe, sounding a similar note, suggested that the infusion of the university spirit into industry would go far to remedy our industrial troubles. In the afternoon Princess Mary attended a Degree Congregation in the Victoria Hall, and received an honorary degree, as did also Sir Austen Chamberlain, Professor P. F. Frankland, Sir Hugh P. Allen, Miss Emily Penrose, and others.

On July 2nd the Marquess of Crewe, unveiling the war memorial, referred to the belief that, in spite of all its horrors, war as a cleansing fire might have a regenerating effect on nations. It was to be hoped that the last war had produced a hatred and horror of war such as had never existed before; this feeling was nowhere more profound than in France.

The delegates then attended the laying of the foundation stone of a gymnasium for the University by Mrs. H. K. Stephenson, and visited the applied science department of the University in St. George's Square, where new research laboratories for engineering and metallurgy were opened by Sir Robert Hadfield. The Marquess of Crewe referred to the good work of Sir Robert Hadfield in promoting a cordial understanding between the leaders of the steel industry in England and France, and Sir Robert Hadfield, touching on the question of unemployment, said it would be alleviated when, by increased output per man, the cost of production was brought down to an economic level. This increase in production depended on the enlightened goodwill of the worker himself; without this all other measures must be vain. Next came the use of every improvement in processes, materials, and plant, and in devising and adopting these the students of the University would play an important part. The visitors later made a tour of the finely equipped workshops and laboratories.

In the afternoon, after the opening of the Hobson Memorial Pavilion at the University playing fields, a cricket match between Sheffield and Liverpool Universities ended in a victory for Sheffield, and a conversazione at the University in the evening concluded the programme for the day. An interesting series of demonstrations and exhibits in the laboratories of the medical school was given. In the department of pathology Dr. Godfrey Carter, professor of medical jurisprudence, gave a demonstration on the recognition of old blood stains; Dr. E. F. Skinner illustrated blood grouping for transfusion; Professor Douglas dealt with the factors in the acquisition of immunity; Mr. Froggatt, in the new laboratory for mechanical dentistry opened last year, showed the melting, rolling into plate, and drawing into wire of gold scrap.

Insurance.

In the year 1925 the number of persons insured with approved societies was approximately 1,650,000. Of these, many thousands received sickness benefit under medical certification. During the year 22,515 cases, which had been medically certified, were contested and referred to medical referees. Of these, 41 per cent. were confirmed, 21 per cent. were not confirmed, and 38 per cent. failed to appear. Records had been kept of these examinations, and some classified results are presented in the report. It appears that there was a special tendency for patients to desire to remain as long as possible on the sick list in cases of anaemia, debility following pregnancy, and various rheumatic affections. In the case of anaemia, 90 per cent. of the referred cases had been found capable of work on examination. In one region special attention had been concentrated on heart disease as the cause of incapacity for work. Among 3,000 heart cases, 286 patients (9.5 per cent.) had been found to be incapacitated by heart disease of some sort.

The report concludes with some general remarks upon such subjects as the welfare of the blind, the organization of consultative councils, the remuneration of medical officers, and the examination and certification of nurses.

ROYAL SANITARY INSTITUTE.

JUBILEE CONGRESS.

THE jubilee congress of the Royal Sanitary Institute opened in London on July 5th and continued for the four following days. Some hundreds of municipalities were represented, as well as Government departments and professional organizations. The British Medical Association was officially represented by Dr. H. B. Brackenbury and Dr. I. W. Johnson. The events of the week began with a luncheon, over which the DUKE OF NORTHUMBERLAND presided. Sir ARCHIBALD GARROD, Regius Professor of Medicine at Oxford, in proposing "Success to the Congress," recalled the sanitary conditions of the eighteen-seventies, at the time the Institute was founded, and said that there was no department of science which could compare with preventive medicine in its achievements during the last half-century.

Inaugural Address by the Minister of Health.

The representatives assembled at the Guildhall for the inaugural address by the President of the Congress, Mr. NEVILLE CHAMBERLAIN, Minister of Health. Owing to his duties at the House of Commons, where he was expected to introduce the Boards of Guardians (Default) Bill, Mr. Chamberlain could not remain more than a few moments, and he contented himself with giving a welcome to the representatives, and saying that he and his colleagues at the Ministry regarded themselves as partners with sanitarians in the great work of preventive medicine. During the period covered by the Institute's activities the science of sanitation had been taken at a bound from the Middle Ages to its present efficiency.

Mr. Chamberlain's inaugural address, which was read for him by Mr. I. G. GIBBON, one of the assistant secretaries of the Ministry, was a summary of sanitary progress since the passing of the Public Health Act, 1875, which still stood, he said, although there had been subsequent enactments, as the foundation of public health legislation. That Act was itself a consolidation, and the time was ripe for a fresh consolidation, and measures to that end were being taken. After reviewing the present situation with regard to infant mortality and other matters, he said that there was some danger lest, because conditions were so much improved, precautions should be relaxed. The precaution of vaccination, for example, was not observed to nearly the extent that was desirable, and there was room for further education of public opinion on that subject. Turning to the directions of future effort, Mr. Chamberlain referred to the need which still existed, particularly in many rural districts, for simple measures of sanitation adapted to local means and circumstances. The Smoke Abatement Bill, to which the House of Commons had given a second reading, offered another opportunity for progress. A further field was the supervision of milk and other food supplies; here it was necessary to walk circumspectly lest scarcity be created by the zeal for purity. With regard to housing, since 1919 more than 670,000 houses had been built, over 413,000 of them with assistance from the Exchequer, and, with the same assistance, a further 224,000 were in course of erection or had been authorized. He had some further measures in contemplation dealing with rural housing. He also touched on the scheme of Poor Law reform which he had circulated for consideration. It was vitally important that the health work now undertaken by Poor Law authorities should be brought into closer relation with that which was done by other bodies. He hoped also that some means would be found of bringing the work of the great voluntary hospitals into closer relation with the work done by public authorities, though he had a strong conviction with regard to the need for maintaining the voluntary character of the hospitals, and would do nothing to impair that character. Finally, he spoke of the need and appreciation of research, saying that he regarded it as necessary that among the medical profession and health workers there should be that general attitude of mind which fostered research, and among the general public a greater appreciation of the value of such work. The reason why English preventive medicine had always been in the forefront was because of the existence of a well informed public opinion.

The vote of thanks to Mr. Chamberlain was proposed by Professor A. BOSTOCK HILL, chairman of council of the Institute, and was spoken to by Sir MATTHEW NATHAN, Professor L. FRIDERICIA, representing the Home Office of Denmark, who said that the modern sanitary movement was born in England, as Denmark was happy to acknowledge, Colonel C. A. GILL, I.M.S., who spoke on behalf of the dominion and colonial representatives, and Alderman EDMONDSON, mayor of Carlisle, on behalf of the municipal authorities.

The Preventive Aspects of Medicine.

The Section of Sanitary Science and Preventive Medicine was opened with an eloquent address by Sir GEORGE NEWMAN, the President of the Section. He described disease as a disharmony within the body which had to be avoided or corrected. The germs of disease were important, but he begged people not to go "germ-mad." The essential thing was the health and resistance of the body. Progress depended more upon social evolution than upon the advance of sanitary science as such. It depended more upon wisdom than upon knowledge. Knowledge and wisdom, far from being one and the same, had ofttimes no connexion. Knowledge was the mere material upon which wisdom built. Lord RIDDELL delivered an amusing essay in this Section on the press and preventive medicine. In the discussion that followed one or two useful points were elicited. Mr. H. LESSER, chairman of the London Insurance Committee, said that his administrative work had made him mourn at the smallness of the proportion of the insured population who realized that national health insurance was an integral part of preventive medicine. Dr. SHADICK HIGGINS, medical officer of health for Capetown, said that in South Africa there was no difficulty in getting the press to publish whatever the medical department wanted. The difficulty was rather for the medical officer of health to prove himself equal to the occasion, and take advantage of the facilities offered. Sir GEORGE NEWMAN remarked that neither the public health officers nor the officials in Whitehall could "deliver the goods" unless there was an educated people.

At the Mansion House on the same morning, at a conference of representatives of sanitary authorities, Dr. G. CLARK TROTTER dealt with a similar subject, "Public health propaganda in its practical aspects." He gave an account of various forms of publicity, and stressed the importance of distinguishing the reasoned and authoritative advice on health from the mass of camouflaged advertising propaganda with which the country was at present flooded.

The first of the technical papers in the Sanitary Science Section was by Major A. G. R. FOULERTON, who spoke of

A certain amount of propaganda for instruction had been arranged by individual local authorities, and the bulk of this work had been efficiently carried out by the Scottish Committee of the British Social Hygiene Council, to whom a grant of £800 was paid towards the cost of an approved programme during 1924-25. The Council's activities, at the suggestion of the Board of Health, had been especially directed to those areas in which least advantage had been taken of the public facilities provided for treatment.

Pneumonia.

The report observes that while far more public interest is devoted to tuberculosis than to pneumonia, the annual deaths from pneumonia in Scotland average between 6,000 and 7,000, while the deaths from pulmonary tuberculosis are under 4,000. The death rate from most of the acute diseases has fallen in the last seventy years, but pneumonia forms an important exception. The mean death rate from pneumonia in the period 1921-25 was roughly 70 per cent. higher than in the period 1855-60. With regard to the reasons for this increased death rate, it was suggested that a number of conditions formerly diagnosed as tuberculous are now regarded as pneumonia, and that epidemics of influenza have undoubtedly affected the pneumonia death rates in some years. It is estimated that since one out of every five persons suffering from pneumonia dies of the disease, there must be between 30,000 and 35,000 cases in Scotland in an average year, apart from cases of secondary pneumonia following measles and whooping-cough. Of the four varieties of pneumococcus recognized in pneumonia, Type I is responsible for about one-third of the cases of acute lobar pneumonia, but Type III is the most fatal. Certain local authorities (Glasgow, Aberdeen Burgh, and Aberdeen County) had undertaken to admit to their hospitals any pneumonia patients whose doctors recommended removal. It is suggested that hospital treatment is the ideal to be aimed at wherever possible, and that, with modern methods of transport, it is safe to remove to hospital a patient suffering from pneumonia up to the fourth or fifth day of the illness, except where signs of cardiac embarrassment are present. In the city of Glasgow the number of cases admitted to hospital during the year was 3,034, as compared with 476 cases in 1919. A serum is now available for the treatment of pneumonia due to the pneumococcus of Type I, but its efficacy is still a matter of doubt. The object of removing cases to the local authority's hospitals has been to increase largely the number of beds available for pneumonia patients.

Rickets.

A special investigation of rickets was made during the year by the Board of Health. Returns made by child welfare centres showed that in seven burghs among 15,114 children attending for the first time there were 683 cases of rickets, or 4.5 per cent., among all such children. In three out of these seven areas the percentages were as high as 10.5, 15, and 54.6 per cent. Returns received from school medical officers showed that out of 179,502 children examined in twenty-two areas, 1,623 were recorded as having had "slight" rickets and 2,359 "marked" rickets. The total percentage for rickets in these areas was thus 2.2. Out of 3,742 children examined on entering school at Aberdeen, 39.9 per cent. of the boys showed traces of rickets and 34.7 of the girls, or more than one in three of the 5-year-old children. Somewhat similar results are yielded in the schools of other areas. The medical officer of health for Glasgow is quoted as having stated that among children between the ages of 6 months and 10 years examined in Glasgow hospitals, 40 per cent. were suffering from rickets. With regard to the influences connected with the production of rickets, returns from Dundee appear to indicate that the percentage of children with rickets was precisely the same—namely, 50 per cent.—no matter what the size of the house from which they came. With regard to feeding, among 290 cases of rickets, 172 were breast-fed for six months or more, 40 were partly breast-fed and partly bottle-fed, and 92 were bottle-fed. The Board considers that it has been fairly well established that vitamin A is a growth-promoting and not a rickets-preventing vitamin, the latter being now known as vitamin D and having a distribution similar to vitamin A but being distinct from it. The explanation of the value of ultra-violet light treatment in cases of rickets was probably to be found in the fact that cholesterol, when exposed to ultra-violet rays, acquired antirachitic properties. The report gives details of the results obtained by the latter means at the Carnegie Clinics at Motherwell and elsewhere.

Maternity Service and Child Welfare.

While the infantile mortality rate is on the whole decreasing there is little indication that puerperal mortality is on the wane. The Registrar-General's returns are quoted as showing that the death rate of mothers per 1,000 births, which was 5.1 in 1865, had risen to 6.1 in 1915 and was 6.2 in 1925. Maternity service and child welfare schemes are now in existence for areas including 92 per cent. of the total population of Scotland. Broadly, therefore, thirteen out of every fourteen of the women and children in Scotland have available to them the services of the local authorities. These schemes differ in completeness, but their extent may be gathered from the fact that the total number of visits made by health visitors during the year was 632,202; of these, 22,561 were to expectant mothers and the remainder to children; of the latter, 67,680 were first visits to newly born infants. The number of health visitors employed by local authorities was 141 whole-time visitors and 417 part-time health visitors. In all there were 196 maternity and child welfare centres in operation, at which there was a total number of attendances of 315,437 during 1925. The number of children who attended for the first time was 20,365, and the number of women who attended for ante-natal consultation was 8,178. The number of centres under the schemes at which special treatment is provided was forty-seven. About one-third of the births occurring in the areas for which figures are available were attended by midwives, and in approximately 5,000 out of these 30,000 births the midwives called upon the assistance of a medical practitioner in emergency.

The Food Supply.

The report indicates that considerable developments took place under the Sale of Food and Drugs Acts during 1925. The Milk and Dairies (Scotland) Act came into operation on September 1st, 1925, as did also the Tuberculosis Order by the Ministry of Agriculture, and the Preservatives in Food Regulations (Scotland) were introduced on August 17th. In terms of the Dairies Act, all dairy cows in Scotland would be subject to veterinary inspection at least once every year, although in towns and cities veterinary inspection of cows will be carried out with much greater frequency. Local authorities had already shown great interest in the supply of clean milk, and the system of licences for the sale of higher grade milk had made definite progress. Only two preservatives (sulphur dioxide and benzoic acid) will be allowed in food after January 1st, 1927, and the staple articles of diet, such as milk, butter, cream, eggs, meat, and fish, will be entirely free from preservatives after the regulations come into operation. The total number of samples of foods submitted to public analysts was 7,635, and of these 778 were found adulterated or not up to the proper standard, the greater number of these (604) being samples of milk.

Health Weeks.

Of the systematic efforts made to educate the public in communal and personal hygiene the holding of a well organized "health week" is commended. The central feature of a health week should be an exhibition of a varied character, including exhibits connected with all the medical services provided by the local authority and by voluntary agencies, such as the Red Cross Society, St. Andrew's Ambulance Association, etc. It is suggested that a section should be devoted to child welfare, another to tuberculosis, and another to food, cooking, and invalid diet. Reference is made to a very successful health week held in Aberdeen in October, 1925, at which the average attendance was 3,500 each day.

obstetrician of skill) for every first confinement. Dr. C. N. BENTLEY (Bengal) said that in the Indian province he represented, with the same population as Great Britain and Ireland, one and a half million births took place in a year. Only one-half the children born reached the age of 8 years. No fewer than 35,000 infants and nearly 10,000 mothers died of tetanus within a few days of delivery. The reason for this appalling death rate was ignorant midwifery. Dr. LEON JONA (Victorian Branch of the British Medical Association) said that he looked forward to the day when midwifery would be in the hands of specialist practitioners only. As regards nursing, he believed conditions in Australia were better than in Great Britain.

CONFERENCE ON MATERNITY AND CHILD WELFARE.

The fourth English-speaking Conference on Maternity and Child Welfare was held in London from July 5th to 8th, and was attended by over seven hundred delegates, the majority of them from public health authorities. The Conference was opened by Sir H. KINGSLEY WOOD, M.P., Parliamentary Secretary to the Ministry of Health, who gave a number of figures illustrating recent progress in the prevention of infant mortality. He deplored the fact that maternal mortality had shown practically no diminution during the last twenty years. Moreover the lessened infant death rate appertained almost wholly to infants after the first month of life. It was the object of the Ministry of Health to create an informed public opinion with regard to maternal mortality, and in this connexion he was glad to say that the number of ante-natal centres had increased during the last two years from 564 to 641, and the number of infant welfare centres from 2,011 to 2,218. The services of trained midwives were now available for nearly 70 per cent. of the rural population.

Dame JANET CAMPBELL introduced the subject of the health of children of from 1 to 5 years. She showed that there had been a general downward tendency in the rate of mortality of children of this age, though there was still room for improvement. Health visitors at present concentrated on the infant, and the little being whom she called the "ex-baby" was likely to be neglected. Competent health visiting, with its many occasions for teaching the mother the importance of mental and physical hygiene, would do more than anything else to raise the standard of health among pre-school children. She also suggested special sessions at infant welfare centres at which children up to 5 years of age might be examined by the doctor two or three times a year. There should also be increased facilities for the treatment of certain defects, such as orthopaedic conditions. The remainder of this discussion was chiefly taken up by the recitation of American experience by three or four visitors from the States.

Conception Control Teaching at Welfare Centres.

A discussion, which was so eager and animated that it took double the time allotted to it on the programme, was on a question which was set out as: "Should medical officers be free to give information on birth control at centres in individual cases?" but which might be more accurately stated as: "Should women as a right receive information on conception control from medical officers at welfare centres?"

Dr. MARGARET EMSLIE, maternity and child welfare medical officer for Croydon, maintained the affirmative, with certain reservations. Her view was that individuals did stand in need of such advice, and that the centre doctor was the best person to give it. She agreed that it would be calamitous if the infant welfare centres became associated in the public mind with the question of conception control *per se*, and she was strongly against miscellaneous instruction; the instruction should be given only in the individual case, and there only on medical grounds or where medical and economic considerations could not be dissociated. She begged those who were hostile to this proposal to give its supporters credit for a moral position. Dr. MARY BLAIR, medical officer of the Hammersmith Centre, took a different view. Whatever the merits of conception control, the infant welfare centre was essentially a health centre, not a resort for the diseased and defective. If it was urged that a woman with phthisis should expect to receive advice on conception control at the centre, the answer was that such a woman had no business there at all; she ought to be under the tuberculosis authorities. Dr. Blair maintained that at the centres what should be taught was the ideal, not the expedient thing. The whole atmosphere of the centres would be lowered if this information were imparted, though she did not think there would be any harm in teaching restraint and continence and knowledge as to certain times in the reproductive cycle. But conception control could not be taught without teaching mechanical methods, which would be very unfortunate from the point of view of the influence of the centre. These speakers were followed by two working-class women, each of whom took a different view of the subject. Dr. ERIC PRITCHARD, who was in the chair, agreed with Dr. Blair. Dr. LETITIA FAIRFIELD also spoke strongly in opposition to the proposal. She said that speakers on the other side began with the assumption that a doctor by virtue of her medical degree should be allowed a wide discretion as to the giving of this advice. But was it right that a woman should allow a doctor to say that she had too many children or not? The infant welfare movement would be broken from top to bottom by any such introduction if it came to be regarded, as it would be, as an attempt to remedy economic ills. She admitted the hard cases, but such cases ought not to be allowed to govern the principle. What would very frequently happen would be that a woman who had had a bad first confinement would go down to the centre and receive this advice, and afterwards settle down into the neurotic mother of an only child. Dr. BINNIE DUNLOP took an opposite position, but he said that he would be satisfied if such teaching as was suggested by Dr. Blair were given at the centres. The fairly even division of opinion among the speakers was reflected in the audience. Cries of protest were made when one medical officer of a clinic declared that behind this demand was a desire to shirk motherhood, and she was answered by another speaker, who said that it was because working women were beginning to realize the dignity of motherhood that they desired to be taught conception control and the spacing of families. If such teaching were not given, the resort of many of these women would be to the criminal abortionist.

BIRTHDAY HONOURS.

THE following honours have been conferred on members of the medical profession, on the occasion of His Majesty's birthday. Owing to the general strike publication of the list was deferred from June 3rd to July 3rd. To all the recipients, and in particular to Dame Mary Scharlieb and Sir Alexander MacCormick, we offer the congratulations of their colleagues.

K.C.M.G.

Colonel Sir ALEXANDER MACCORMICK, Kt., M.D., F.R.C.S.Ed., Honorary Consulting Surgeon, Prince Alfred Hospital, and Surgeon, St. Vincent Hospital, Sydney. In recognition of his service to the Commonwealth of Australia.

D.B.E. (Civil).

Mrs. MARY ANN DACOMB SCHARLIEB, C.B.E., M.D., M.S., Consulting Gynaecologist, Royal Free Hospital.

Knighthood.

ALFRED HENRY EVANS, M.R.C.S., L.S.A., J.P., Member of the Unionist Association of the Tamworth Division since 1895, and President and Chairman since 1920. For political and public services.

C.B. (Military).

Surgeon Captain REGINALD ST. GEORGE SMALLRIDGE BOND, M.B., F.R.C.S., R.N.

Major-General ROBERT STRICKLAND HANNAY, C.M.G., D.S.O., K.H.S., Deputy Director of Medical Services, Southern Command.

C.M.G.

JOHN OWEN SHIRCORE, M.B., Ch.B., Director of Medical and Sanitary Services, Tanganyika Territory.

C.V.O.

ERNEST CLARKE, M.D., F.R.C.S., Consulting Surgeon, Central London Ophthalmic Hospital.

the place of bacteriology in preventive medicine, and traced the work done in the recent war in shielding the British Army from infections. Dr. A. F. TREDGOLD spoke of the place of inheritance in preventive medicine. The factor of inheritance, he said, unlike that of environment, was little appreciated, but although not much was known of the mechanism whereby it was brought about the fact of inheritance was obvious and indisputable. He did not think it could be questioned that even susceptibility and immunity to the action of micro-organisms was largely a matter of inheritance. While far from deprecating efforts directed towards the improvement of surroundings, he pointed out that there existed in the community a very large number of persons in whom innate tendencies to physical defect and ill-health were so marked that, whatever the environment, their offspring were likely to be similarly handicapped. This led up to a plea for a place for eugenics in the science, practice, and teaching of preventive medicine. The final paper of this session was by Dr. H. P. NEWSHOLME, who spoke of the influence of the healthy mind in preventing bodily ill-health. His argument was that preventive medicine could not be wholly preventive until it included the mind in its province.

In the Section of School Hygiene Professor WINIFRED CULLIS and Dr. LEONARD HILL opened a discussion on the recommendations made to the Board of Education Advisory Committee with reference to the introduction of physiology into schools, and this was followed by a discussion on colds and catarrhal conditions, opened by Dr. CLIVE RIVIERE, followed by Dr. A. I. SIMEY and Dr. L. R. LEMPRIERE.

The Rheumatic Child.

Papers on rheumatism were contributed by two members of the special subcommittee of inquiry into heart disease in children, set up by the British Medical Association, whose report was published as a special SUPPLEMENT to the last issue of the BRITISH MEDICAL JOURNAL. Dr. CAREY F. COOMBS said that the report in question included a comprehensive summary of the institutional provision available in this country for prolonged treatment of rheumatic infection. This was a tale of fragmentary and imperfect effort, which made a poor show when compared with the generous accommodation afforded in America for children suffering from such conditions. There existed an American Heart Association which had done great things on behalf of cardiac invalids in general and the rheumatic child in particular. In the earlier stages of cardiac rheumatism a certain percentage of recoveries could be claimed. He knew of no way in which that percentage could be increased except by prolonged and efficient institutional treatment. The treatment of rheumatic children in a school hospital would help to teach the public, as well as the profession, what were the principles of defence against this infection. The other paper was by Dr. F. J. POYNTON, who laid stress upon the gravity of the condition of acute rheumatism in the young, the need for further study of its causation, and of the associated nerve strain, and the environmental, dietetic, and epidemiological factors. He was convinced by clinical and experimental evidence that the tonsils were a site of access of this infection. Statistics would not shake him in this belief, but it was not to be supposed that that was the only site. Another step in prevention to which he looked forward was the establishment of a central institute for the study of "rheumatism." It was a wasteful policy to be content with isolated investigations. A properly organized institute could do continuous work, train investigators, and collect information.

Sir GEORGE NEWMAN said that it was high time something definite was done about rheumatism, and he rejoiced that it had a place in the programme of the Congress. Progress in preventive medicine did not lie in repeating the old shibboleths about environment, but in a new grasp and understanding of the group of diseases which invalidated the people. Dr. IZOD BENNETT spoke of the intestine in relation to the occurrence of chronic rheumatism, and blamed the widespread use of preserved foodstuffs for the invasion of the bowels by dangerous micro-organisms. Dr. REGINALD MILLER dealt with the environmental factors producing the rheumatic child, and quoted the facts elicited by the British Medical Association's subcommittee, of which he was secretary. Dr. JAMES WHEATLEY (Shropshire) and other medical officers of health joined in the discussion, which chiefly concerned the questions of bad housing, damp soil, and other predisposing factors.

Midwifery in the Home.

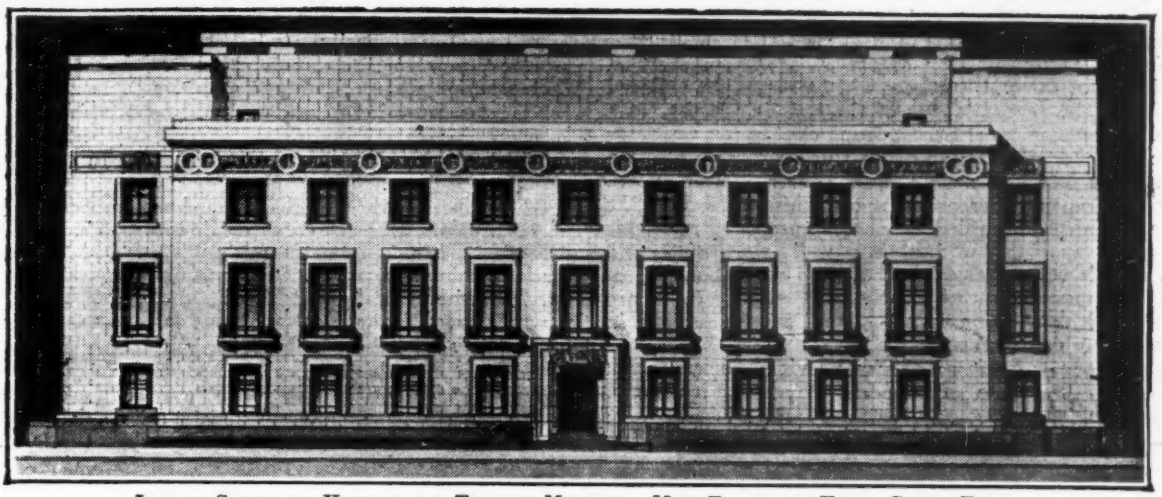
On Wednesday morning a joint session was held with the Maternity and Child Welfare Conference, under the presidency of Lady FORSTER OF LEPE, when the subject for discussion was midwifery in the homes of the people.

Dr. T. WATTS EDEN, in opening from the consultant's point of view, said that the conduct of labour was a surgical procedure; it might be of the simplest surgical character, or developments might occur to transform it into a major surgical operation. The surgical requirements which must be regarded as the minimum of safety in the home included the services of a trained midwifery nurse. No doctor ought to be expected to attend a confinement without the help which such a nurse could give him. It was a national disgrace that "handy women" were still allowed to ply their evil calling. These unclean anachronisms, reminiscent of the bad days which produced Sairey Gamp, were one of the most potent influences in maintaining the high rate of puerperal sepsis. The public attitude in recent years had been a little unfair to doctors, especially to the family doctor. Not all the emergencies of confinement were capable of being foretold by the most careful medical supervision. Assuming an adequate degree of care and skill on the part of the doctor and nurse, they were no more to be held blameworthy for the casualties of midwifery than for the unfavourable termination of a medical or surgical illness.

Dr. W. ALLEN DALEY (M.O.H. Hull), speaking of the need for better training of the midwife and of the doctor in midwifery, said that between 1,000 and 2,000 preventable maternal deaths still took place in this country every year, and thousands of cases of chronic ill-health resulted from bad midwifery. There should be collaboration between the private doctor, the private midwife, and the local authority's medical and nursing staff.

Dr. E. KAYE LE FLEMING (British Medical Association) said that the conditions under which the general practitioner had to perform his duty often varied widely from the ideal. In many cases they made ordinary (not to speak of surgical) cleanliness impossible. But the very difficulties which the general practitioner encountered, and his wide experience single-handed, developed his skill, resource, and independence, and made him a real specialist in midwifery. No case gave the general practitioner more anxiety than a maternity case which developed complications during the puerperium. The speaker dissented from some popular conclusions based on the statistics of puerperal fever. Apart from the unreliability of figures taken from selected areas and relating to an ill defined condition, a large number of these cases arose when labour had been apparently normal, and free from interference by nurse or doctor. On the other hand, cases in which many factors favouring sepsis were present frequently ran a normal course. Some unknown factor must be invoked to explain the complication—possibly an unrecognized influence tending to diminish the normal personal resistance to infection. Speaking generally, after an experience of twenty-five years in town and country practice, he was convinced that there had been the same steady advance in the treatment of maternity cases as in medicine and surgery generally and in public health. This had been assisted by the quickening of the means of communication, the advance of the general standard of cleanliness in the home, the steady replacement of the "handy woman" by the trained midwife, and the earlier recognition of complicated cases, with the provision of hospital accommodation for them. It was along these lines that continued improvement must be looked for. More ante-natal and post-natal clinics must be established, the former especially to detect cases of possible pelvic malformation and independent disease.

A large number of speakers joined in the discussion, including some from overseas. Dr. DICKINSON (New York) said that in New York it was the object to ensure, not indeed one bed for every maternity case, but one bed in an obstetric institution (or at least attendance by an



LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE. MAIN ELEVATION—KEPPEL STREET FRONT.

THE LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE.

FOUNDATION STONE LAID BY THE MINISTER OF HEALTH.

THE foundation stone of the London School of Hygiene and Tropical Medicine was laid by Mr. Neville Chamberlain, Minister of Health, on the afternoon of July 7th.

Rather more than five years ago a committee was appointed by the Ministry of Health, with the Earl of Athlone as chairman, to investigate the needs of medical practitioners for further education in medicine in London. A memorandum was furnished to the committee by the British Medical Association, and in May, 1921, a report was issued by the committee advocating the establishment of a post-graduate medical school in London, and also of an Institute of State Medicine, both to be in association with the University of London. The committee's recommendations were published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL for July 16th, 1921 (p. 25). An expert committee, of which the Minister of Health was chairman, was appointed to consider the recommendation as to an Institute or College of Hygiene: the chief difficulty in the way of its realization was financial. The matter was placed before the Rockefeller Foundation, and in February, 1922, the Rockefeller Trustees generously offered two million dollars (£400,000) towards the cost of building an Institute or School of Hygiene in London on the understanding that the British Government would accept the responsibility of providing for the staffing and maintenance of the school when established; the cost of this was estimated at about £25,000 a year. A second donation of £4,000 yearly was subsequently promised by the Rockefeller Trustees to provide for the payment of a director and an administrative staff charged with the duty of making all necessary preliminary arrangements regarding the building and the scope of its work. Dr. Andrew Balfour was accordingly appointed Director at the end of October, 1923. During the long period that has elapsed since the original decisions were taken we have referred more than once to the great importance of the principles underlying this project, and we therefore welcome the opening of the last stage in the creation of an institution which will, we believe, have a powerful influence on the development of scientific hygiene and preventive medicine in the British Empire and beyond.

DESCRIPTION OF BUILDING.

Before proceeding to a description of the building it appears desirable to state very briefly the requirements which had to be met, and which, together with the extent and form of the site and the funds available, determined the architectural form which the School is to assume. The building to be erected has been designed by Mr. P. Morley Horder, F.R.I.B.A., and Mr. Vernon O. Rees, A.R.I.B.A.

Provision had to be made for teaching hygiene in all its branches, for instruction in tropical medicine, and for research work in both these subjects and in any of the ancillary sciences. The balance had to be maintained equally between teaching and research. Both are essential, both are important, and careful and sympathetic consideration had to be given to both. As a result, it was finally decided to provide for research one-sixth of the total space available for instructional purposes. This may be regarded as a liberal allowance when it is remembered that the space devoted to teaching includes a big lecture theatre, numerous roomy classrooms and general laboratories, a library, a very large museum on two floors, tutorial rooms, and other accommodation. The number of students which the School is intended to accommodate is 250. Of these, it is considered that 100 will be engaged upon the study of tropical medicine—a figure based on the present attendance at the courses given in the Tropical Division at Endsleigh Gardens, where there has of late been an average of nearly seventy each session. The remaining figure, 150, representing students studying for diplomas or degrees in public health, has intentionally been placed very much on the safe side. At present there are only about forty-five students attending courses in London for the diploma in public health, but it is noteworthy that a recovery has taken place from the marked fall in numbers which followed the introduction of the new regulations of the General Medical Council, and there seems little doubt that this increase will continue, although it may be many years before there are as many as 150 aspirants for a public health qualification.

Meanwhile, however, the space provided will not be wasted, for there is likely to be, before very long, a surplus of research workers who can occupy to good effect some of the accommodation for ordinary students. If by the time that more accommodation is required for teaching purposes it becomes necessary to add to the size of the School this could be done, as care has been taken to see that its foundations and walls can carry another story.

The building—of which the foundations have been laid, while a start has been made upon the steel structure—will be situated between Gower Street and Malet Street, adjoining the large and lofty premises which form Messrs. Bourne and Hollingsworth's hostel. It will front south upon Keppel Street, and it is hoped that at least the frontage, which contains the main entrance, as shown in the illustration, will be of Portland stone. This Keppel Street elevation will be enriched by a wide fringe composed of wreaths and of the names of some of the great pioneers in hygiene and in tropical medicine. Finality has not yet been reached as regards these names. Over the main entrance there will be a large panel on which the handsome and interesting seal of the School will be engraved. There will be side entrances from Gower Street and Malet

C.I.E.

Colonel KRISHNAJI VISHNOO KUKDAY, I.M.S., Inspector-General of Civil Hospitals, Central Provinces.

Lieut.-Colonel THOMAS WILLIAM HARLEY, I.M.S., District Medical and Sanitary Officer and Superintendent, Medical School, Madura, Madras.

C.B.E. (Civil).

Colonel GEORGE WYKEHAM HERON, D.S.O., O.B.E., R.A.M.C. (ret.), Director of Department of Health, Palestine.

O.B.E. (Military).

Temporary Captain WILLIAM BLIGH, M.D., R.A.M.C.

Lieut.-Colonel HENRY ROBERT BROWN, I.M.S.

Major WILLIAM EGAN, D.S.O., M.B., R.A.M.C., Deputy Assistant Director of Medical Services, Scottish Command.

Major CHARLES HENRY HASLER HAROLD, M.D., R.A.M.C., Assistant Instructor, graded as Deputy Assistant Director of Hygiene, Aldershot.

Captain (local Major) JOHN WRIGHT MALCOLM, M.C., M.B., R.A.M.C., attached Iraq Levies.

M.B.E. (Military).

Captain WILLIAM DANIEL ARTHUR, R.A.M.C.

O.B.E. (Civil).

ANANDRAI KESHAVLAL DALAL, F.R.C.S., Professor of Clinical and Operative Surgery, Grant Medical College, Bombay, and Surgeon, Jamsetjee Jeejeebhoy Hospital, Bombay.

DIGBY MACKENZIE MACPHAIL, M.B., C.M., Medical Officer, District 1, St. Lucia, Windward Islands.

WILLIAM MACLACHLAN MCDONALD, M.R.C.S., L.R.C.P., Medical Officer, District 2, Antigua, Leeward Islands.

FRANK EDRED WHITEHEAD, M.R.C.S., L.R.C.P., Director of Military and Sanitary Services, Nyasaland Protectorate.

M.B.E. (Civil).

Major JOSEPH HENRY ARNOLD DONNELLAND, I.M.D., House-Surgeon, Jamsetjee Jeejeebhoy Hospital, Bombay.

Major HENRY CLEMENT CRAGGS, I.M.D., Military Assistant Surgeon, Madras.

ALAKH BEHARI ARORA, Medical Officer of Health, Lahore.

To be Honorary Member of the Civil Division of the Order of the British Empire.

HALIM ABU RAHMEH, Medical Officer, Department of Health, Palestine.

Kaisar-i-Hind Medal (First Class).

Miss AGNES SCOTT, M.B., Chief Medical Officer, Women's Medical Service, and Secretary, Countess of Dufferin's Fund.

JOHN DAVID O'DONNELL, M.B.E., V.D., F.R.C.S.Ed., Chief Medical and Sanitary Officer, Kolar Gold Fields, Mysore.

Major JOSEPH ALEXANDER H. HOLMES, I.M.D., Senior Assistant Surgeon, British Station Hospital, Quetta.

Companion of the Imperial Service Order.

Major HERBERT WILLIAM V. COX, I.M.D., Civil Surgeon, Punjab.

NAVAL PROMOTIONS.

The following promotions are announced in connexion with the King's Birthday honours:

Royal Naval Medical Service.—Surgeon Commanders to be Surgeon Captains: HERBERT R. H. DENNY, JOHN S. DUDDING, O.B.E., ARTHUR R. THOMAS, C.B.E., F.R.C.S., PERCIVAL T. NICHOLLS, JAMES MCCUTCHEON, M.B.

Royal Naval Volunteer Reserve.—Surgeon Commander to be Surgeon Captain: ROBERT J. WILLAN, M.V.O., O.B.E., V.D., M.B., M.S., F.R.C.S. Surgeon Lieutenant Commanders to be Surgeon Commanders: FRANCIS H. WATSON, M.B., GEORGE H. S. MILLS, M.B. (Surgeon Commander, Emergency List, R.N.).

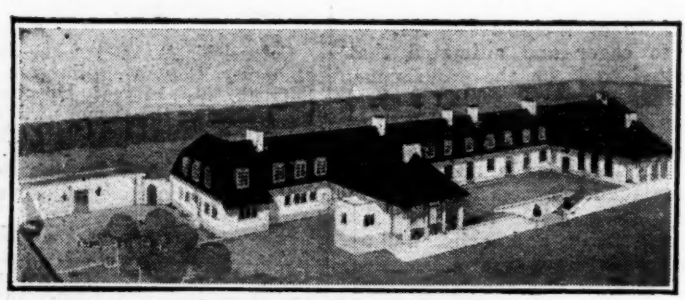
The name of Miss Agnes Hunt, of the Hospital for Cripples, Gobowen, near Oswestry, also appears among those upon whom the honour of D.B.E. is conferred. Over a quarter of a century ago (1900) she established on a small scale at Baschurch, near Shropshire, a hospital for cripple children in which the principle of open-air treatment was from the first carried out. She had from the beginning the help of Mr. (now Sir) Robert Jones; he, with the assistance of other surgeons who volunteered their services, visited the hospital periodically to perform operations which were found to be necessary, especially in cases of bone and joint tuberculosis. The hospital grew, and Miss Hunt organized a system of local clinics, by which cases requiring treatment were discovered. Afterwards the hospital was removed to a more commodious building near Oswestry. The principles for which Miss Hunt worked have been extended to other counties, and the Central Committee for the Care of Cripples was established. In congratulating Miss Hunt we congratulate also the medical profession, of which she is so beloved and distinguished a colleague.

WAR MEMORIAL HOSPITAL AT ANDOVER.

FIELD-MARSHAL VISCOUNT ALLENBY formally opened the War Memorial Hospital at Andover on June 30th. The building, which has just been completed, is erected on open land to the north of the town on a gentle slope to the south-south-west. The main wards projecting to the south form a wide sheltered and screened court for the use of patients. Every room in the hospital gets the full sun except those where it is not desirable, such as the operating room, the *x*-ray room, and the kitchens and offices, which have all been planned along the north side, with easy access to the patients' quarters on the south.

The main central corridor has been kept low to allow cross-ventilation to the private wards on the south side, and this has permitted considerable economy in construction. Heating is by a low pressure hot-water plant, though all wards have open fires in addition. The cooking will be by gas. The building is lighted by electricity. The main wards have been designed to give 100 superficial and 1,050 cubic feet per patient, and the private wards considerably more. All the windows in the wards are of the metal Austral type, and above them are additional windows of the hopper type, giving ventilation at the ceiling level.

The two ward kitchens have been placed in such positions that they serve also as duty rooms to two wards in each case. There are large sun verandahs at the south end of the two main wards.



ANDOVER WAR MEMORIAL HOSPITAL.

The concrete foundations are laid on the solid chalk and all the outside walls are of hollow construction, being built of 9-inch internal brickwork, 2-inch cavity, and 4½-inch exterior brickwork, rendered in cement on the outside. The general character of the building is shown in the accompanying illustration from a drawing exhibited at the Royal Academy. The total cost of the building, providing twenty beds and three private wards, has been £16,000. The possibility of future additions has been kept in mind throughout, and the building can be readily extended at three separate points. The most pressing addition will probably be a maternity ward and a children's ward to the south-east at the end of the main corridor. The men's and women's wards can be extended considerably in length without affecting any other portions of the building. It is hoped that the administrative portions will be found sufficiently large to serve these suggested additions without alterations. The architects are Mr. Edward Maufe, M.A., F.R.I.B.A., and Mr. Leslie Moore, *M.C.*, F.R.I.B.A., of Raymond Buildings, Gray's Inn, and the builders Messrs. Musselwhite of Basingstoke.

H.R.H. the Prince of Wales paid a private visit on June 29th to the hospital on his way to the railway station from Enham Village Centre, and made a careful inspection, at the end of which he expressed the opinion that it was a very fitting memorial and that the town was to be congratulated on the possession of such an up-to-date hospital.

the non-professional staff and teas for the staff generally, as there are many good restaurants and tea-rooms in the immediate vicinity of the School.

In the centre, behind the museum storage rooms, is the lower part of the lecture theatre, which has accommodation for 250 students. Behind it again come the lecturers' room and the preparation room. From the latter, cinema, epidiascope, and lantern work will be conducted, so that no space will be taken up in the theatre by cumbrous apparatus. Special attention has been paid to the question of acoustics, the elimination of draughts, adequate lighting, and facilities for rendering the theatre dark. The upper part of the boiler house and the engineers' shop are in the rear of the preparation room and lecturers' room.

Library and publication stack rooms are accommodated in the basement, as are large cloak-rooms and lavatories for men and women students. On the east side of the north court is situated a large *post-mortem* room, with an adjoining preparation room. It is hoped here to conduct autopsies upon animals dying in the Zoological Gardens, which often exhibit the lesions of diseases met with in the tropics. At present the School is in close touch with the Zoological Society of London, a member of its staff being pathologist to that society, and it is hoped to make the most of this association. A lobby separates the autopsy room from the laundry.

On the west side of the north court are grouped the goods reception store and issue rooms, together with the carpenters' and metal workers' shops. Elsewhere in the basement are placed the distilling room, the room for large centrifuges, safes for chemicals and valuables, the telephone exchange, and the fans for air extraction. The chamber housing the latter will be insulated to deaden noise.

Ground Floor.

The main entrance on Keppel Street will lead into a fine entrance hall, which communicates directly with the stair hall. The latter gives immediate access to the lecture theatre—a convenient arrangement which, on occasions when the theatre is used for "outside" lectures or demonstrations in the evening, or indeed at other times, prevents the audience from wandering about the building and incidentally increasing the work of the cleaning staff. Cloak-room and lavatory accommodation, both for the staff and the general public, are provided at the back of the entrance hall.

The whole of the front block, facing Keppel Street, with the exception of the Gower Street corner, will be used for general administration, the Board Room receiving special architectural treatment, as it will be panelled in oak and ebony. The Gower Street corner houses the professors' common room and writing room. The eastern wing of this floor, facing Malet Street, contains, from south to north, the Director's laboratory and a Laboratory of Sanitary Engineering, which is intended to be partly a classroom, wherein students studying public health will be taught to read and perhaps to prepare plans, will become conversant with the principles of town planning, and will work with rough models of filters and other sanitary appliances with which they should have some acquaintance, if only to enable them to discuss questions of sanitary engineering intelligently with members of the engineering profession. Still further along will come the premises devoted to Division VI—General Sanitation and Public Health—and these extend also into the cross-bar of the H. Ample provision has been made in the way of classrooms, as much of the instruction must perforce be of a theoretical nature, the student getting his practical instruction under medical officers of health and others, both in urban and rural districts.

In the cross-bar facing north, and thus assured of good lighting, is the Laboratory of Tropical Hygiene, already mentioned, wherein the clinical pathology of the tropics will also be taught. It is appropriately flanked by the private laboratory of the clinical pathologist and the room of the lecturer on tropical hygiene. The western wing of the ground floor, facing Gower Street, contains common rooms for the professors and men and women students, and a room for the service of tea and light refreshments. At the north end is a large students' study room, where silence will be enforced. Elsewhere the accommodation here has been held in reserve until it is found how best it can be utilized.

First Floor.

The Library, which will be a large and imposing room 33 feet wide by 120 feet long, is given the place of honour in the front of the building. To its left lie the offices of the Bureau of Hygiene and Tropical Diseases, which it is proposed should continue, as at present, a tenant of the School. It is indeed possible that a closer association will eventually develop. Hence the term "Publications Department" has been inserted in the plans. Behind the offices of this department comes a range of fine large rooms devoted to this important branch of informative and propaganda work. Immediately behind the Library access is provided to the flat roof of the lecture theatre, which will be laid out as a garden court. The west end of the Library is bounded by an ample periodicals room, for it is intended that the current literature shall be separately housed and made readily available for consultation. This room communicates with the Library, and both can be thrown open, together with the above-mentioned roof-garden, on the occasion of large social or scientific gatherings.

A so-called small conference room, which can, however, accommodate over a hundred people, lies to the immediate north of the periodicals room, and to its north again come a spare room and the laboratory for the visiting staff. The rest of this, the west wing, is entirely occupied by the Division of Epidemiology and Statistics, and contains a laboratory, card-index room, study rooms, dark room, and quarters for the staff. The whole of the cross-bar of the H is devoted to the Division of Applied Physiology, as is the northern half of the east wing of the building. This division is likely to be closely concerned with the problems of industrial hygiene, and so, in addition to the *x*-ray department and constant temperature room in the basement, it is provided with a large cross-lighted laboratory, a range of fine research rooms, mostly facing north, a gas room, and a gas chamber. In one of the research rooms the string galvanometer will find a place. A room has been set aside to serve as a reprint library and for the use of typists, while there are the usual staff quarters, a dark room, a hot incubator room working at 37° C. and 22° C., and a refrigerating chamber or cold incubator room. As in all the large divisions, there is a central cleansing department. Lavatory accommodation for men and women is, as on all the floors, tucked into the angles which the north court makes with the cross-bar of the H.

Second Floor.

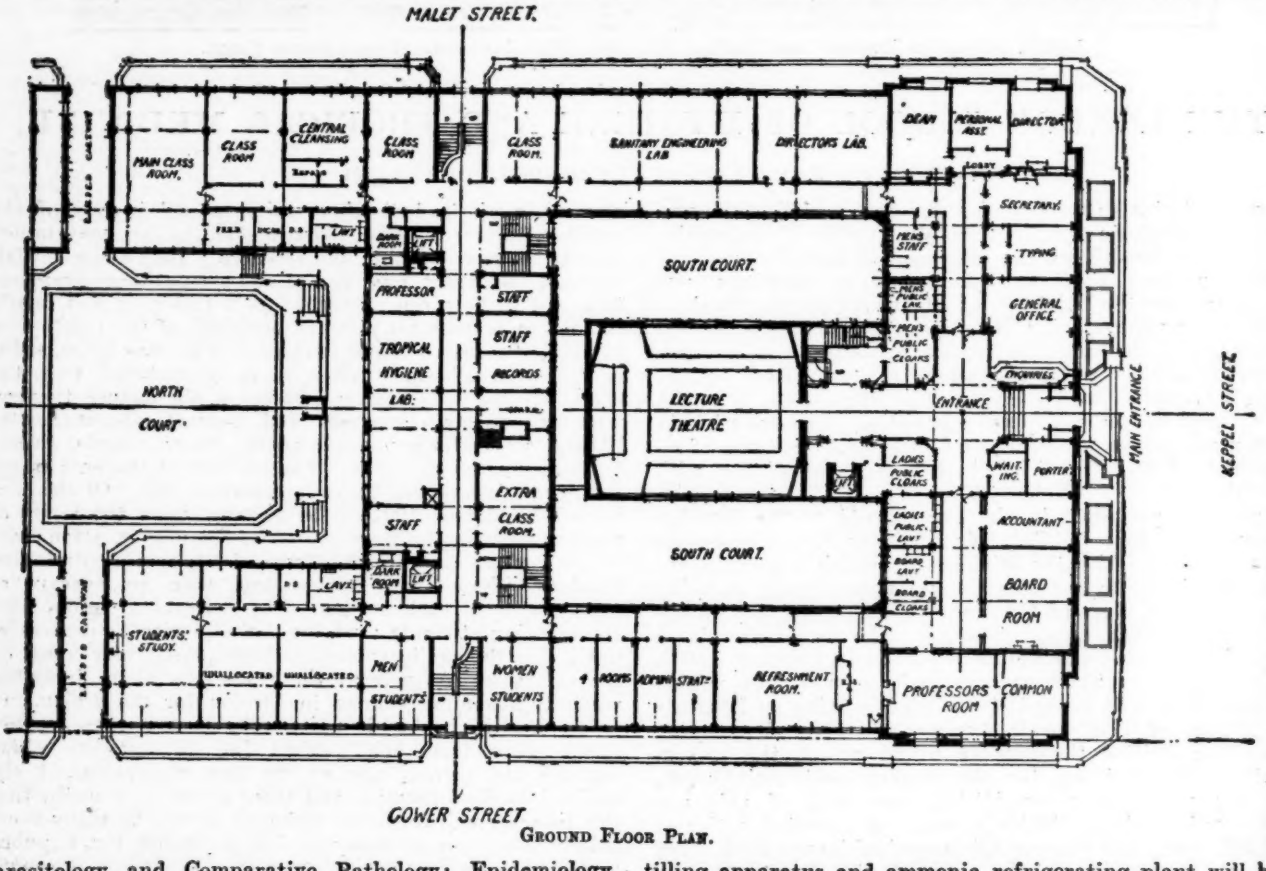
Here the lower story of the Museum, which will be devoted to hygiene, runs the whole length of the Keppel Street front. In the roof there are three open wells admitting light from above, while it is well lit on the south by windows looking out on Keppel Street, and less fully on the north by windows overlooking the north court. There should, however, be ample daylight illumination, and it is important to secure as much wall space as possible. The Museum has been granted 15,000 feet of floor space, but in all probability this will eventually be found insufficient to illustrate adequately the huge subjects with which it will be concerned.

The rest of the building on this floor is divided between the Division of Chemistry and Biochemistry and that of Bacteriology and Immunology. The latter has been given the larger share, for there are likely to be more research workers in bacteriology, but there is no great difference in the space allocated to each. Chemistry and Biochemistry are housed in the east wing and eastern portion of the cross-bar of the H; Bacteriology and Immunology are on the western side.

The large laboratory of the Chemical Division in the north-east corner of the building can accommodate 70 students, and the Biochemical and Nutritional laboratory can take 35. It is hoped that special instruction will be given on the subject of nutrition, and that research will be carried out, not only on the nutritional value of

Street, with subsidiary entrances to a north court. The elevations to Gower Street and Malet Street will be simple and severe, the only relief to their severity being the emphatic size and projection of the main side entrances. The plainness of the wall surfaces will be somewhat relieved by carving. The general shape of the building is that of a letter H with the Keppel Street front closing one end (the southern end of the H) and the cross-bar dividing the enclosed space into two nearly equal courts, one of which, the northern, is not encroached upon, while the other, the southern, is partly occupied by the lecture theatre. This arrangement provides a building well ventilated and lighted, and it will be easy to find one's way about it, in view of the manner in which the different sections are grouped. The ventilation is by natural means, except in the case of the lecture theatre.

The provisional scheme of studies provided for six main divisions—namely, those of Applied Physics, Physiology, and Principles of Hygiene; Chemistry and Biochemistry; Immunology and Bacteriology; Medical Zoology, including Parasitology and Comparative Pathology; Epidemiology and Statistics; and finally, the Principles and Practice of Preventive Medicine, General Sanitation, and Administration. This grouping has been retained, but, in addition, the fact that the clinical pathology of exotic diseases forms a most important part of tropical medicine has been recognized, and a special laboratory has been devoted to the joint needs of this subject and of certain branches of tropical hygiene, with which, of course, tropical pathology is intimately associated.



GROUND FLOOR PLAN.

Basement.

The only true basement is represented by the boiler house, which is wholly below ground level. There the heavy engineering plant will be placed, and, for its domestic hot-water supply, the School will be served by steam-heated boilers (calorifiers), while the boilers supplying the steam will have furnaces designed for burning coke, but capable of easy conversion for oil fuel. A water-softening system will be used in connexion with the boilers for the steam plant.

After long and careful consideration, some experimental trials, and the inspection of premises where the system is in vogue, it has been decided to warm the building by the "panel system" of heating. This is a modification of the old Roman hypocaust method, and has many advantages, while its disadvantages and difficulties can, it is believed, now be discounted. This, it may be said, is the first occasion where the panel system will be employed for the general warming of a large building of this type, but it is believed that the innovation will justify itself. Accordingly special steel boilers with piping, valves, pumps, and other accessories will be supplied for this purpose.

In the lecture theatre there will be a mechanical system of ventilation, and the fresh air introduced will be steam-heated. There will be an adequate supply of electricity for both light and power. Gas and hot and cold water will be distributed throughout the building, and steam under pressure through the greater part of it. Full inquiries were made as to the desirability of establishing plant for compressed air and vacuum, but it was eventually decided not to do so, partly on the score of expense, and partly because it is now possible to make adequate local provision—that is, in the laboratories themselves—for such services. A distilling apparatus and ammonia refrigerating plant will be provided, but, while cold incubator rooms will serve certain of the divisions, others will be supplied with small refrigerators.

The basement, which is really a half-basement, communicates on either flank with useful cellar vaults in Gower Street and Malet Street. On the Malet Street side ten of these will have tiled walls, and will be utilized for the exhibition of working models in connexion with the museum. The basement will be well lit on its outer aspects by windows extending above pavement level and on its inner aspects by windows looking out on the north and south courts. On the Keppel Street front there is extensive provision for museum storage, some of which may eventually be adapted for actual museum exhibits. The storage rooms are flanked on the east side by an *x*-ray department which will form part of the Division of Applied Physiology, as will the constant temperature room, from which it is separated by the main photographic section. Each division will, in addition, have its own facilities for photographic work. On the west side of the museum storage are situated reserve laboratory storage, the kitchen, dry canteen, and various mess rooms. It is not intended to provide anything more than light luncheons for

British Medical Journal.

SATURDAY, JULY 10TH, 1926.

MALARIA RESEARCH IN ENGLAND.

WE have before us the Report on the First Results of Laboratory Work on Malaria in England,[1] by Colonel S. P. James and Mr. P. G. Shute. If this *hors d'œuvre* is an earnest of the feast of good things to follow we must look forward to a period of serious mental digestion; the food for thought provided is ample in quantity and rich in quality. The account given helps considerably to elucidate certain points which are obscure in the epidemiology of malaria, and opens up new views of the directions in which antimalarial measures should be undertaken.

The employment of infected mosquitos in the treatment of general paralysis to overcome the objection to direct inoculation of blood from patient to patient has afforded an excellent opportunity of studying malaria contracted in a natural way and the conditions and circumstances governing infection of mosquitos. Pure strains of the benign tertian parasite were used, and *Anopheles maculipennis* as the vector. Of 2,630 female mosquitos used 530 were found ultimately available for infection of 145 patients, of whom 109 developed the disease. It was found that the mortality of *A. maculipennis* kept in artificial "tropical" conditions at 24° C. was high—about 50 per cent. during each seven to ten days of life. At 22° C. it was less, but the time taken to become infected was longer, and fresh feeds of blood were needed daily or every other day. If a temperature of 26° C. was maintained with a view to obtaining quick infection nearly all the mosquitos died before the salivary glands contained sporozoites—that is, before they became infective. At a low temperature, such as 4° to 6° C., infected mosquitos lived up to two and a half months and retained their infectivity. These facts may help to explain the absence of new cases during very hot seasons, and also, since the oöcysts are arrested in development but not killed by the low temperatures, the recrudescence of cases in the spring.

The authors found, further, that a surprisingly small number of persons who suffer from malaria are infective to anopheles. Some with induced malaria were not infective at any period of their course, and the strikingly infective patient was a rarity, while repeated feeds on an infected patient were needed to infect the mosquito. Since this occurred under the most favourable artificial conditions it is thought probable that "95 per cent. of potential malaria-carrying mosquitos will never play that role." Hence, it is concluded, much of what is done in the way of antimalarial measures is wasted effort.

Further, it would appear that malaria is a disease which does not spread unless a number of special conditions are fulfilled, and is probably to a large extent a "household" disease, and should consequently be dealt with in the houses of the people as much as, in fact more than, in their environment.

Interesting results were obtained relative to what has been erroneously termed "immunity to inoculation." Great caution must be exercised to avoid confusing immunity with diminished susceptibility or increased resistance to infection, because patients differ much in this respect. It is suggested that this difference may perhaps be ascribable to some simple cause, such as modifications in the blood as regards alkalinity, or a change in the content of lecithin or other bodies, and not to the presence of "immune bodies" in the blood.

The clinical observations are also of vast importance in showing that the classical description of benign tertian malaria cannot stand in the case of the induced disease. The course is divisible into three stages. In the initial stage, lasting for two to five days, there was gradually increasing irregular fever, remittent in character at first, later intermittent, but without any rigors. In the second, or developed, stage, in 80 per cent. of cases there was for ten days or more a quotidian fever with daily rigor, even if infection had been conveyed by a single bite. The third, or terminal, stage was characterized by the type of fever changing from the quotidian to the tertian. The incubation period was usually twelve days, but in many it was ten days; it might be as short as seven or as long as twenty-three. The parasites were not as a rule found in the peripheral blood till the second or third day of fever. In a second attack from a new infection, even after a prolonged interval, the temperature was of the true tertian periodicity. If, therefore, a patient showed a typical tertian temperature from the start, this very fact was a strong indication for inquiry as to a history of previous malarial attacks.

In the treatment of general paralysis it was found that a rigor on alternate days was followed by greater benefit than when a rigor occurred daily. This objective was usually attained by allowing the primary attack to continue for four or five days, then giving a small dose of three to five grains of quinine to bring about a temporary check, and waiting for a relapse. Under these conditions the temperature was nearly always of the true tertian character, with rigors on alternate days.

Future reports will be awaited with keen anticipation.

[1] Report on the First Results of Laboratory Work on Malaria in England. By S. P. James, M.D., Lieutenant-Colonel, I.M.S. (ret.), assisted by P. G. Shute, Laboratory Assistant, Ministry of Health. Publications of the League of Nations—III, Health. Geneva. 1926.

ORTHOPAEDIC CENTRES FOR WALES.

SIR ROBERT JONES, whose energy and enthusiasm led to so much being done for the soldier crippled in war, has not ceased to direct attention to the needs of crippled children. On July 1st he delivered an address at a meeting arranged in London (at Carnegie House) by Sir John Lynn-Thomas, who will act as honorary secretary of the Welsh Branch of the Central Committee for the Care of Cripples then inaugurated. Lord Kenyon presided, and many medical officers of health and others from Wales were present. A message was read from the Prince of Wales in the course of which he expressed a hope that an alliance might be made with the hospital in Cardiff which bears his name (the Prince of Wales's Hospital for Limbless and Crippled Soldiers). Sir Robert Jones said that crippled children were in exactly the same position as the soldier who had suffered damage to his limbs in warfare. The child must be seen early, and it must have rest at the onset of the disease. To meet these requirements there must be plenty of hospital beds so that there might be no waiting list, rapid evacuation must be avoided, and there must be provision for after-care in order to secure continuity of treatment. To achieve this ideal treatment three things were essential—open-air hospitals, skilled staffs (medical and

foodstuffs, but on their money value. The best food for the least money is a problem requiring close attention in this and other countries. The biochemist must have his experimental animals alongside him, so a roomy and well ventilated animal house has been sandwiched in between the Biochemical Laboratory and the Museum. Access to it is obtainable from the laboratory. The Chemical Division has its quota of staff and research rooms and a fine classroom with 90 seats. A special balance room takes the place of a refrigerator chamber, but a hot incubator room is provided, as is a dark room. If found advisable, one of the other rooms can be converted into a laboratory for special combustion work.

The chief feature of the Division of Bacteriology and Immunology is the large bacteriological laboratory, which can hold 90 students and has cross lighting and ventilation. There are smaller general laboratories in this division, which also contains a good-sized classroom, media, sterilizing, and washing-up rooms, hot and cold incubator chambers, research laboratories, and the inevitable dark room.

Third Floor.

The upper story of the Museum, which will be devoted to tropical medicine and hygiene, runs the whole length of the Keppel Street front and has roof lighting, which, as stated, is communicated to the lower story by three open wells in the floor. In close touch with this part of the Museum are the Museum offices and preparation rooms in the west wing. The rest of the floor is wholly given up to the important Division of Medical Biology and will accordingly absorb the greater part of the work of the old London School of Tropical Medicine, now continued at Endsleigh Gardens as the Tropical Division of the present School. Part of the accommodation will be common to the whole division—as, for example, the large laboratory on the Malet Street side with working room for 86 students. This should be a very fine laboratory as, in addition to cross-lighting, it has a weaver roof. Other rooms which will be shared by the four departments constituting this division are the two large classrooms, the preparation room, the seminar room, the advanced demonstration room, the reading and reprint room, and the insectarium and aquarium.

In the advanced demonstration room, as in the tropical hygiene laboratory on the ground floor, there will be sliding partitions so that the room can be turned at will into working cubicles or used for general demonstration purposes. The rest of the space—that is, that between Malet Street and the north court and that between Gower Street and the north court—is more or less equally distributed between the Departments of Helminthology, Comparative Pathology, Protozoology, and Entomology, and is represented by staff rooms, preparation rooms, hot incubator rooms, and so forth. There are some special features, such as a joint dissecting room for helminthology and comparative pathology, a room for housing the helminthological collections, a faeces room, adequately ventilated, and a stock room for entomological specimens. There is, fortunately or unfortunately, one spare room in this division, and it is to be hoped it will not prove an apple of discord.

Fourth Floor.

This is a recessed floor occupying only the cross-bar of the H and the southern portion of the Gower Street front. Towards Malet Street lie the caretaker's quarters, towards Gower Street the artist's room and cinema preparation room. Between stretches part of the animal quarters, with exercise court and all conveniences. From the artist's room there runs south a special range of mice quarters. A separate heating plant will be provided for the animal quarters. A raised sloping area on the Malet Street side of the roof of the third floor will be covered with slates and will be used for the collection of rain water, which, after being filtered in a special way, will be led by pipes to the aquarium.

Fifth Floor.

This is represented by additional accommodation for animals and provision for water tanks and fan chambers. Like the fourth floor, it is recessed from the wall line of the main building and is of no great extent.

LAYING OF THE FOUNDATION STONE.

Sir ALFRED MOND, Bt., M.P., Chairman of the Board of Management, recounted the circumstances of the Rockefeller benefaction, and then went on to describe the building as a workshop where skilled labourers would pursue their tasks for the betterment of the human race. The simple dignity of the frontage was a key to the fundamental purposes of the school. After announcing that the Board of Management had made representations to the Senate of the University of London for the appointment of professors to two of the new chairs, he paid a high tribute to the assistance afforded by Sir Cooper Perry, whose impending retirement from the principalship of the university happily did not involve the severance of his connexion with the school, for he was vice-chairman of the Board of Management.

The Hon. W. G. A. ORMSBY-GORE then spoke on the relation of the work of the tropical division of the school to the dominions and colonies. Ever since he had been at the Colonial Office it had appeared to him that British trusteeship for the great tropical possessions made it necessary to be up and doing in the matter of health and sanitation. Britain had all round the world a belt of tropical possessions, and from all those which he had visited, alike in East and West Africa, he had come away with the idea that, both from the point of view of the welfare of British officials and traders, and from that of the native populations, there was a great task ahead. At present the mortality and sickness rates in many areas were appalling. He paid a tribute to two great men, to whom the building would be in some sense a monument—namely, Mr. Joseph Chamberlain and Sir Patrick Manson. Only those who had visited the tropical empire realized the debt which humanity owed to Manson, whose example and tradition would be perpetuated in the school.

The Right Hon. NEVILLE CHAMBERLAIN (Minister of Health), before laying the stone, said that the ceremony marked the commencement of a building in which the two great English-speaking nations shared. To him also it was a great gratification, within a few days of the ninetieth anniversary of his father's birth, to add another stone to the fabric which Joseph Chamberlain founded in 1899. The linking up of the London School of Tropical Medicine with the wider field of preventive medicine was a recognition of the fact that, whilst the study of tropical diseases was still, and probably must always be, the work of the specialist, it formed only a branch of the much wider application of a science covering every clime and every people. Sir Cooper Perry had called his attention to the need of the school for further permanent hospital facilities, and he hoped shortly to appoint a committee (of which Sir Alfred Mond had kindly consented to act as chairman) to go into that matter. Mr. Chamberlain then gave a brief history of the school and what it owed to the Rockefeller Foundation. He touched also upon some of the principal departments of the work—the study of physiology as applied to hygiene, of bacteriology and immunology, of medical biology, of epidemiology and vital statistics, and, finally, sanitary science and public health in general.

Mr. Chamberlain then laid the stone, after which Dr. Andrew Balfour, director of the school, handed to him and to Mr. Ormsby-Gore replicas in silver of the school seal. A telegram was sent to the Rockefeller trustees, conveying the Minister's cordial greetings, and adding that, "The British and American flags fly side by side at the dawn of a new era of preventive medicine."

Among those present at the ceremony were:

Sir Humphry Rolleston, Bt., Sir John Bland-Sutton, Bt., Sir George Newman, Sir Cooper Perry, Sir Holburt Waring, Sir Walter Fletcher, Sir Leslie Mackenzie (Scottish Board of Health), Sir John Robertson (Birmingham), Sir Arthur Robinson (Ministry of Health), Sir Malcolm Delevingne (Home Office). The British Medical Association was represented by Dr. H. B. Brackenbury (Chairman of Representative Body), Mr. Bishop Harman (Treasurer), and Dr. Alfred Cox (Medical Secretary).

Previous to the stone-laying, Sir Alfred Mond entertained a large party to luncheon at the Carlton Hotel.

More than thirty years ago Dr. G. A. Turner, in his presidential address to the Glasgow Obstetrical and Gynaecological Society,[3] told how the infantile mortality from tetanus was done away with. The owners of the island had done their best, and a Gaelic-speaking nurse from Glasgow had spent some months in St. Kilda, during which the babes of whom she had charge survived, but after she left no successor could be found. Then the minister, the Rev. Angus Fiddes, stepped into the breach. He took a course of training under Dr. Turner, and returned to St. Kilda to assume the duties of monthly nurse. He seems to have rather misunderstood some of his instructions, for he nearly starved the newborn infants, and stupefied them with two grains of chloral daily; but despite this, cleanliness and iodoform won the day. Since 1891 no deaths from trismus nascentium have occurred.

Before the discovery of the tetanus bacillus there were many speculations as to the cause of trismus nascentium. It is interesting to note that in 1846 Marion Sims attributed it to displacement of the cranial bones, especially the occipital, a pathology which seems to have been favoured by earlier writers, for Quincy in the eighteenth century stated that overlapping of these bones caused convulsions and death. The discovery of the bacillus does not seem even yet to have set the question at rest. It has only altered it, so that now the problem is to find how the organism reaches the umbilical cord from the soil or some other breeding place.

In a recent most interesting article on "The tragedy of St. Kilda"[4] Dr. G. Gibson of the General Board of Control, Scotland, suggests that probably the umbilical cord was dressed with fulmar oil, and that this contained the specific organism. The fulmar petrel (sometimes wrongly called a gull) is almost the staff of life to the St. Kildeans. It furnishes a large part of their diet, some 150 to 200 being salted annually per head of the population for winter use. It is not a pleasant creature. Known to whalers and fishermen as "the greedy molly-mawk," and alluded to by Dr. Gibson as a "winged skunk," it suggests the midshipman's characterization of certain savages, for it has "no manners and its customs are beastly." One of these is when annoyed to squirt some of the oily contents of its stomach into the intruder's face. This habit is taken advantage of by the islanders, who dexterously divert the oil into a receptacle, such as the dried stomach of a gannet, in which they store it for use. Dr. Gibson does not attempt to prove that one use of the oil was as a dressing for the umbilicus, nor, further, that it usually contains living tetanus bacilli; and we think that until he has made such demonstrations his suggestion must remain no more than an ingenious speculation. It is to be remembered that trismus has been a scourge of lying-in hospitals and other places where fulmar oil is unknown. Not only in the islands near Iceland, but in such places as Demerara and Dublin, it has caused shocking mortality. In the beginning of the nineteenth century 18 per cent. of the children born in the Rotunda Hospital died of trismus, as was pointed out by Dr. C. R. Macdonald in 1886 in considering this question in our columns.[5] There are doubtless many ways by which the bacillus might be conveyed to the umbilical cord, but until its presence is proved in the stored fulmar oil it is unnecessary to inquire whether that oil was formerly used as an unguent for the navel.

The "boat-cough" from which the St. Kildeans suffer after they are visited by strangers seems to be a febrile catarrh, and is no doubt analogous to the "shore-cough" to which in the old sailing-ship days seamen so often fell victims when they first landed from long sea voyages. When the Dreadnought Seamen's Hospital Society maintained an out-patient dispensary in Well Street, London Docks, a large share of the medical officer's time was devoted to the treatment of such catarrhs. A similar course of events has been noticed in children's hospitals where some of the patients spent their whole time in the open air. When brought into a ward for operation or some other purpose these children commonly suffered from catarrh, from which they had been free while outside.

THE PRESERVATION OF THE EYESIGHT OF CHILDREN.

THE letter of Dr. W. Oliver Lodge of Bradford (p. 93) opens up a large field for consideration. He rightly points out that there are many defects of eyesight which are discovered too late for the effective prevention of serious consequences. The conditions which give rise to these defects, or the defects themselves, may be present in early infancy, and certainly exist when the children come first to the elementary schools. Defects arising from cataract are generally recognized early, often by the parents; squint is such an obvious deformity that it calls for immediate attention in every civilized community, and it certainly gets it at least as soon as the child goes to school. But there are other defects—high degrees of astigmatism, early myopia, and suchlike errors of refraction—which may not give obvious notice of their presence. These, Dr. Lodge claims, should be discovered by the systematic examination of infants' eyes so soon as they go to school, and their discovery should not await the age of 7 years, when the first routine examination of physique, including vision, is undertaken by the school medical officers. That there is a large amount of undiscovered defective vision in the infant schools is certain. In a discussion held by the Ophthalmological Society in 1919 papers were read by Dr. James Kerr, Dr. William Sym, and Mr. Bishop Harman in which this subject was dealt with. The last named gave the findings of the routine examination of the eyes (with an efficient cycloplegic) of all the infants, to the number of 368, in a good class London elementary school within the ages of 4 and 7 years. Allowing a liberal error of refraction as within the "average," he found that no less than 35 per cent. had such high errors of refraction that medical attention and some form of easement of the educational regime was undoubtedly necessary. The most obvious medical treatment would be the provision of spectacles to correct the errors of refraction. But such a proposition opens up a wide question as to practicability. Would the most enthusiastic desire to see one-third of the infants wearing glasses? And if the infants had the glasses, how long would they remain in effective use? Besides, there is the large question of expense—both that involved in the necessary medical examination of large numbers of infants, and the cost of providing and replacing spectacles. It would appear that the necessities of such a situation would be far better met by making the education of infants meet for the infants rather than to attempt to make the infants able to undertake some educational regime, a scheme possibly evolved apart from consideration of the tenderness of the eyes of infants, be they "average" or worse than average. The opening phases of infant education are as difficult and need as much care and thought as the polishing of the finest minds of the public school or the university;

[3] *Glasgow Medical Journal*, March, 1895.
[4] *Caledonian Medical Journal*, vol. xiii, No. 2, April, 1926, p. 50.
[5] BRITISH MEDICAL JOURNAL, July 24th, 1886, p. 160.

nursing), and after-care clinics. The hospital must be in the country; the staffs must be specially trained; the hospital must be thoroughly equipped for physiotherapy, and with ultra-violet rays, and so on. The after-care clinics should be within twenty miles of the hospital. Such schemes were already in existence in Oxfordshire and Shropshire; Wales was a difficult problem, but it was well to remember that it had a well organized tuberculosis scheme. Although the charter of the Welsh Memorial Association did not allow non-tuberculous cripples to be brought under the same control as the tuberculous, Sir Robert Jones hoped that both sides would come together for the purpose of distributing crippled patients to appropriate hospitals, and that they might arrange to divide certain expenses between them. Schemes might be started in one of two ways—either mainly by voluntary effort with State aid (a method which Sir Robert seemed to favour) or as a municipal scheme. He urged that Wales should get to work as soon as possible, that the centres already in existence at Cardiff and at Gobowen, near Oswestry, which was also serving some of the eastern counties of the principality, should be developed, and a third centre established in Bangor for Northern Wales. Meanwhile the headquarters should be at Cardiff, an admirable centre for a start because of the existence of the Welsh National Medical School. Cardiff would need an open-air hospital of at least 100 beds in addition to the Prince of Wales's Hospital. There should be clinics in various centres, the localities to be determined after careful consideration. In their establishment and supervision the help of Miss (now Dame) Agnes Hunt should, if she were willing to give it, be obtained. A body of whole-time orthopaedic nurses, fully trained if possible, should be got together and a skilled medical staff appointed. Provision should be made also for the treatment of adult cripples. Sir Robert Jones called particular attention to the need for full fellowship and accord with the local medical practitioners, who must always be the first line of defence. As a first step in starting a scheme, a meeting should be called by local committees to which the doctors and the chief people of the neighbourhood should be invited; and school doctors, medical officers of health, and general practitioners should always be welcomed at the hospitals. An advisory board for the selection of sites would be a great advantage.

It is probable that the medical profession will agree that such schemes as Sir Robert Jones outlined should have a voluntary basis, although it may not be possible entirely to do without the aid of the State or the County Councils. The health and education authorities are now so much concerned with the welfare of the patients who come under these schemes of treatment that it is only natural that payments by these authorities should form a large item in the hospital receipts. Thus, in the financial statement of the Wingfield Orthopaedic Hospital, near Oxford, of which Mr. Girdlestone is clinical director, it appears that receipts on account of services to patients, presumably paid chiefly by local authorities, amounted to £18,000 out of an income of £21,000. But the hospital remains a voluntary hospital with a voluntary staff, and with a committee which includes a large number of voluntary members. Many of the members represent other voluntary hospitals and voluntary bodies, such as the British Red Cross Society, while local authorities are represented by members appointed by the county councils and boroughs. The after-care clinics have energetic local ladies as honorary secretaries; the funds are raised locally through subscriptions, entertainments, and patients' payments. A scheme such as this appears to retain as far as possible under modern conditions the voluntary principle; probably the principle has advantages in economy, possibly in efficiency, and certainly in freedom and sympathy, over less flexible schemes administered by public authorities.

There can be little doubt that early experiments in organization are best conducted by private effort, especially under existing economic conditions; and the reference made to Sir Robert Jones's enthusiasm by one of the proposers of the vote of thanks sufficiently indicated the damping effect of the official mind when it is a matter of balancing the enthusiasm of the pioneer against the care of the public purse. At the same time the ultimate cost of public administration almost invariably tends to become excessive.

A cordial vote of thanks was accorded to Lord Kenyon for presiding, to Sir Robert Jones for his address, and to Sir John Lynn-Thomas, the honorary secretary of the new Welsh branch, to whose enthusiasm the inauguration of the branch is largely due.

ST. KILDA.

To many of us the name of St. Kilda raises up only recollections of Boswell and of Dr. Johnson's speculations in epidemiology, but the island is interesting from a medical point of view on account of the former terrible mortality among newborn children therein and the occurrence of what is known as boat-cough. In former numbers of this JOURNAL these subjects have been discussed, and full accounts of the place and its inhabitants have appeared from time to time.[1] Situated in the Atlantic some sixty miles to the westward of the greater Hebridean islands, the St. Kildeans have until lately been in the world but hardly of it, for throughout the winter months the island is inaccessible. No doubt the popularization of wireless communication will, if it has not already done so, much modify their isolation. In 1912 a trawler brought the news to Aberdeen that the islanders were starving. The Admiralty at once ordered a warship to call and relieve their most pressing wants, and a London daily paper, scenting a "scoop," chartered a steamer and engaged a surgeon and others to take food and necessaries to them. No time was lost, but when they arrived at St. Kilda the journalists found that H.M.S. *Achilles* had been before them, and that there was no starvation or distress to be relieved. A full and interesting account of the island and its people, as they then were, appeared in this JOURNAL soon afterwards (1912, i, 1249) from the pen of the surgeon in question, Dr. C. J. Gordon Taylor.

Starvation has not in the past been a great danger to the islanders, who rely chiefly on a plentiful supply of seabirds for their food, but slow extinction threatened them in the last century through the excessive infantile mortality from tetanus or trismus nascentium. Dr. John E. Morgan stated[2] that in the ten years 1830 to 1840 there were 65 births and 64 deaths, of which 33 deaths at least were due to the "eight-day sickness." The population amounted to 105 in 1830, but it has since declined to about 80, at which figure it appears to be stationary. The people are strong and healthy despite their necessarily consanguineous marriages; they are not subject to dangerous epidemics, and but for a few casualties incidental to rock-climbing in the taking of seabirds they run few risks.

[1] BRITISH MEDICAL JOURNAL, 1886, ii, p. 160; 1912, i, pp. 1201 and 1249.
[2] *British and Foreign Medico-Chirurgical Review*, January, 1862, p. 176.

OPEN-AIR LIFE IN WINTER.

EXPOSURE to cold increases basal metabolism. Hence, in part at least, the sense of well-being induced in the physically fit by outdoor sports. Hence, too, in part at least, the usefulness of the open air in the treatment of the sick. Its value to those who come between these two classes, being neither wholly fit nor yet actually diseased, is well shown in a recent report by Dr. S. G. Moore, medical officer of health for Huddersfield. In it he summarizes in an interesting way the effects of treating 62 subpar Huddersfield children, aged from 5 to 13 years, for periods between October 17th, 1925, and March 29th, 1926, at a residential open-air school, the Cinderella Holiday Home at Honley. Clothing suitable to withstand the winter cold was provided, but no medical treatment was given. Artificial sunlight was started in some cases, but was discontinued after four days owing to an outbreak of scarlet fever in the home. A number of the children for various reasons went out of residence, but it was possible to make serial observations on 39 (20 boys for sixty-six days and 19 girls for eighty-two days). All these on admission were anaemic, debilitated, and mentally dull. They soon became bright, alert, and full of vitality. All, with a few exceptions, showed increased chest expansion on discharge. The increase in weight of both boys and girls during the periods of treatment, calculated for age groups on an annual basis, was greatly above the corresponding annual figure for the average Huddersfield child of the same age. On the other hand, the increase in height, similarly worked out, was in boys below the Huddersfield average, though in some of the girls it was above it. For the boys the average percentage of haemoglobin on admission was 76.8, on discharge 82.8; for the girls—on admission 77.37, on discharge 83.37. Both sexes had an increase of 6 per cent., but both were still below the normal 87 per cent. for children. For the boys the average red cell count on admission was 4,672,625, on discharge 4,760,800; for the girls—on admission 4,512,631, on discharge 4,985,263. The increase for girls was greater than for boys, but both sexes still fell short of 5,500,000, the normal count for children. Enlarged glands, if present, were in all cases cured or improved, and enlarged veins of the trunk in all cases but one. It is clear from Dr. Moore's account that these children derived much physical and mental good from their winter life at Honley. Their increased chest expansion and the disappearance of enlarged trunk veins suggest gain in respiratory capacity. Their disproportionate rise in weight is evidence alike of their initial disability and of the extent to which it was redressed. As the daily average of bright sunshine in the neighbourhood of Honley during the six winter months is under two and a half hours, it may be surmised that keen fresh air and good food and clothing were the principal factors in producing these results.

FOOD PRESERVATIVES.

THE control of the use of preservatives in food still rightly excites a great deal of interest both among the medical profession and the public. The new proposals are strongly opposed by certain members of the trade, and upon a matter of this kind the opinion of Professor E. Mellanby, F.R.S., of Sheffield, is most valuable. We may therefore recall some of the arguments used by him in an address he gave last autumn to the National Council for Domestic Studies. He divided food preservatives into three classes: (1) formaldehyde and hydrofluoric acid and their derivatives; (2) boron preservatives and salicylic acid and its salts; (3) benzoic acid and sulphurous acid and their salts. All these substances, he said, were toxic to some people in certain doses, and, while they prevented putrefaction, none of them were completely protective against organisms of the salmonella group and their toxins, which are responsible for many outbreaks of food poisoning. On this point Professor Mellanby expressed the opinion that there was a double danger in food preservatives: first, that they prevented the hoisting of the danger signal of putrefaction; secondly, that they failed to inhibit with equal efficiency the growth of the more common food poisoning micro-organisms. Of the two departmental committees appointed to consider food preservatives, that which sat from 1889 to 1901 brought about the rejection of the first group of preservatives, formaldehyde and hydrofluoric acid. The departmental committee of the Ministry of Health, appointed in 1923, recommended the rejection of the second group, the boron preservatives, so that after 1927 the only preservatives allowed should be benzoic and sulphurous acids and their salts. Boric acid and other substances of the group were, he said, very popular with manufacturers, probably because they were tasteless, odourless, and, when added in quite a small proportion, delayed putrefaction, although they did not prevent to the same degree the development of the Gaertner bacilli. From the commercial point of view, boric acid was better than common salt for preserving meat; it did not withdraw the water or spoil the shape, nor did it produce discoloration, and the meat was less stringy and tough. Boric acid was used, however, in so many foods that many people were taking comparatively large quantities daily, probably from 8 to 30 or even 40 grains. There was no doubt of the toxicity of boric acid in large quantities, and even in small quantities in susceptible people. The drug could produce nephritis in animals, so that it was possible that boric acid might be one of the causes of Bright's disease in normal individuals. No doubt many people lived to a hearty old age in spite of consuming boron preservatives; but Professor Mellanby thought it probable that the drugs might cause some disturbance of health, evidenced by dyspepsia, rashes, and possibly renal disease. Coming to the third group, Professor Mellanby observed that benzoic acid was rapidly excreted as hippuric acid, and that sulphurous acid was converted to a sulphate, and so merely formed part of what many people took daily as a purgative. Nevertheless, he argued for the prohibition of the use of all preservatives, and believed that later on another committee would sit and the third group would go. Transport and cold storage would improve greatly, and the need for chemical preservatives would be as little necessary in England as it was now in the United States. One argument used by Professor Mellanby was that as all these substances prevented the reproduction and growth of bacilli they were likely to have a detrimental effect on human beings, who were made of the same material as bacilli. If they were poisonous in large quantities, it was only safe to believe that they were harmful to health in smaller quantities, especially when taken continuously. Benzoic acid, although it could be taken with a certain amount of impunity up to 8 grains a day, would cause death if taken in large quantity; and there was no doubt that sulphites acted as gastric irritants. Again, if the same foodstuff from one source was in some cases adulterated with preservatives and in others unadulterated, it was plain that it could not be claimed that preservation was essential. None of the butter from New Zealand and Australia imported into the United States was allowed to contain preservatives; yet some of the butter imported from the same sources into this country was preserved. Finally, Professor Mellanby pointed out that during the last forty years, coincident with the use of food preservatives, there had been a development of a number of diseases, the colossal importance of which the average layman did not grasp. Cancer, of which so much was heard, was unimportant from an economic standpoint compared with many other diseases to which we were liable. Of these, diseases of the alimentary canal were pre-eminent. The mortality from intestinal diseases had greatly increased in recent years. Thus,

indeed, the risks involved in infant education are the greater, for the younger the subject the smaller the power of resistance, and lack of care may give an unhappy twist to budding mind and body which may be irrecoverable. But, apart from this, there is much to commend added attention to the eyesight of the infants in our elementary schools.

PUBLIC HEALTH IN CHINA.

In a nation with wide-flung empire, such as ours, it is perhaps not easy to arouse interest in the health activities of a foreign country so distant as China. Nevertheless, our trade interests in Eastern Asia are very great; the health of the workers employed by British merchants is of importance; and the functions of such bodies as the Manchurian plague prevention service and of the sanitary bureau which controls maritime quarantine have international aspects. There is now arising in China a body of cultured medical opinion, trained abroad, which desires to improve the sanitary condition of the country, and to establish a public health service modelled largely on that of England. For promoting this object an Association for the Advancement of Public Health in China has been formed; and the association has addressed a memorandum to the British Boxer Indemnity Commission. As the Boxer rising in 1900 is probably hardly remembered now, it may be recalled that China is paying an indemnity to the Western nations which took part in the suppression of the trouble, and that portions of that indemnity are being used by some of those nations to assist in the development of China. Hitherto the British have applied these funds largely to education; but the trouble stirred up by Chinese students last year led the Government to send out a commission under Lord Willingdon to inquire on the spot as to the best direction in which to apply the indemnity. It was to this commission that the Association for the Advancement of Public Health in China presented its memorandum, which, if sometimes stiff in expression and over-elaborated, is written in very good English. It appears that in China a certain amount of machinery exists for public health purposes, but it is unorganized and mainly in the hands of the police. A sanitary service with skilled medical directors and a personnel of sanitary inspectors does not exist. The Chinese doctors, in their memorandum, ask that a portion of the Boxer indemnity, previously devoted to education, should now be applied to what they call "demonstrations" for a period not exceeding five years, and to the training of a sanitary personnel. By "demonstration" they appear to mean that a city should be selected as a centre and should be used experimentally as a sanitary area, with the approval and assistance of its local authority. The association suggests three such centres—one in Peking, one south of the Yangtze, and one in Szechuan. In these areas, it suggests, experiments should be made in the introduction of public health measures. The "demonstrations" should cover administration, vital statistics, communicable disease, and general sanitation; the personnel should be trained locally in connexion with the work of each area. The diseases against which the health work should be specially directed would be tuberculosis, small-pox, plague, cholera, and the gastro-intestinal diseases due to soil pollution. It is stated in the memorandum that the present lack of stability in government in China affects only the national and provincial governments, and that the initiation of successful public health work depends upon the local governments, which are unaffected. In an appendix to the memorandum an account is given of the lamentable condition under which the Chinese labourer lives, with horrible descriptions of the bad housing and feeding and lack of medical attention and nursing found in some of the places visited. The memorandum ends with an appeal to the British Boxer Indemnity Commission to help to deliver the workers from their misery, and thus to stop the progress of Bolshevism. It should be a source of satisfaction that distinguished members of the National Medical Association in China should turn to this country for help in preventive medicine. Great Britain, they say, was foremost to recognize the importance of public health, and modern industrialism originated in Great Britain. Their proposal seems to merit serious consideration by the Foreign Office and the Government.

PROPOSED POST-GRADUATE HOSTEL IN LONDON.

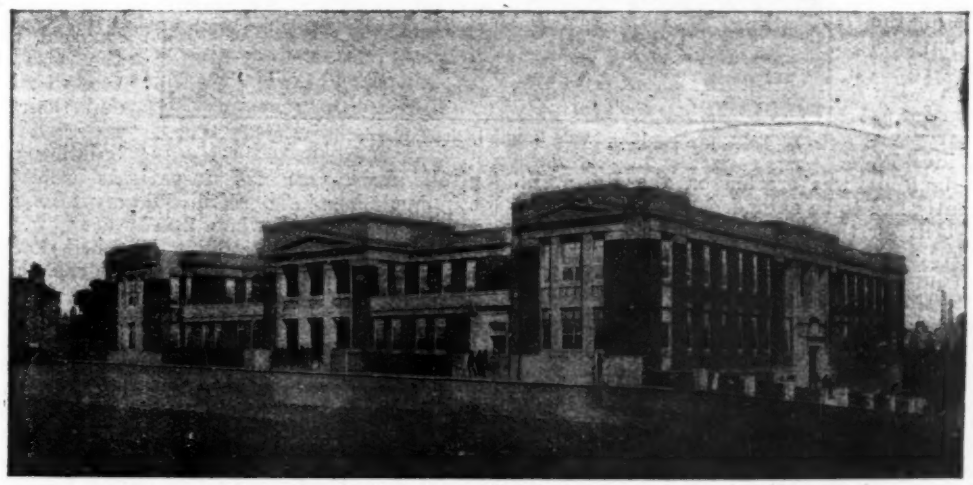
THERE has long been a feeling that medical men who come to London for post-graduate study have no opportunity of meeting their teachers and fellow students socially. This was one of the original aims of the Fellowship of Medicine, established by Sir StClair Thomson and the late Sir John MacAlister as an organization independent of the Post-Graduate Association. For various reasons, including financial considerations, the Fellowship did not make all the progress that was desired, and after a short experience strengthened its position by amalgamating with the Post-Graduate Association. Many of those who have given attention to the organization of post-graduate medical education in London believe that there is need for a special hostel in London at which graduates taking the courses now arranged by the combined Fellowship of Medicine and Post-Graduate Association could reside. It will be remembered that rather less than a year ago the Minister of Health appointed a committee "to draw up a practical scheme of post-graduate medical education centred in London," and, although we have no direct information, it is probable that one of the subjects which will be discussed by that committee will be the establishment of such a hostel. Meanwhile, in order to test the extent of the need, arrangements have been made to provide a central place of residence for post-graduate students where they will be received at rates varying with the requirements of the visitor. The hostel will be under the supervision of a president, a director, and a treasurer, who will form the committee, working in conjunction with a board of vice-presidents drawn from the metropolitan and provincial schools and three or more members chosen by the post-graduate members themselves. The suggestion was brought before the Council of the British Medical Association at its last meeting, and the Medical Secretary was appointed to take part in the preliminary arrangements and to assist in giving the scheme a start. The managers of the Imperial Hotel in Russell Square have agreed to place at the disposal of the committee a bedroom with writing table for each member; a reading room which will be available all day and every day; a dining room where breakfast and dinner can be taken apart from the general guests of the hotel; and a lecture room which is to be at the service of the hostel from 9 p.m. every day. It is hoped that the members of the committee will take frequent opportunities of dining at the hostel, and that after dinner informal discussions may take place on subjects of medical interest. A preliminary meeting was held on Tuesday last, when Sir D'Arcy Power, K.B.E., F.R.C.S., took the chair and explained the objects of the hostel as set forth above. He expressed the hope that it would be found possible to work with and by the Fellowship of Medicine, which was doing such excellent work in post-graduate teaching. He attributed the inception and carrying out of the scheme to Mr. A. P. Bertwistle, F.R.C.S.Ed., formerly of Leeds and now of London, and read a number of letters of approval from leading members of the profession. Further particulars may be obtained from Mr. Bertwistle, 4, Spital Square, Bishopsgate, E.1.

NINETY-FOURTH ANNUAL MEETING
of the
British Medical Association,
NOTTINGHAM, 1926.

THE ninety-fourth Annual Meeting of the British Medical Association will be held at Nottingham this month under the presidency of Mr. R. G. Hogarth, C.B.E., F.R.C.S., senior surgeon to the Nottingham General Hospital, who will deliver his address to the Association on the evening of Tuesday, July 20th. The Annual Representative Meeting, for the transaction of medico-political and administrative business, will open on the previous Friday, July 16th. The sectional meetings for scientific and clinical work will be held on Wednesday, Thursday, and Friday, July 21st, 22nd, and 23rd. The names of the officers of the thirteen Sections are published in the SUPPLEMENT this week, together with the provisional programme of arrangements for the Annual Meeting. On the last day of the meeting (Saturday, July 24th) there will be excursions to places of interest in the neighbourhood. The article printed below is the fifth of a series of descriptive and historical notes on Nottingham and the neighbouring country The earlier articles appeared in the JOURNAL of December 5th, 1925 (p. 1081), January 23rd, 1926 (p. 158) March 20th (p. 541), and June 5th (p. 957).

THE MEDICAL INSTITUTIONS OF NOTTINGHAM.

THE city cannot claim to have any hospitals with very ancient foundations, but is well provided with modern ones, both charitable and otherwise. History, however, does tell of one institution, the Hospital of St. John the Baptist, which was in existence in 1208, but is long since defunct. It is interesting to note that among its various duties was the "care and reparation of the Bridge of Nottingham." The earliest of the modern foundations is the General Hospital, which will stand comparison with most institutions of the kind. In addition there are the various special hospitals mentioned below, the fine Poor Law hospital at Bagthorpe, and several others, and it is most satisfactory to note the increasing co-operation between the staffs of the various hospitals, which is so essential for the advancement of science and the treatment of disease.



Architectural drawing of new building (Ropewalk Wing) for the Nottingham General Hospital.

GENERAL HOSPITAL.

This hospital stands in a high position overlooking the park, in close proximity to the castle, and commands wide prospects towards the south. The site is historically famous, as it was here that Charles I raised his standard at the outbreak of the civil war. The hospital was established in 1782, two acres of land having been given for the site in 1781 by His Grace the Duke of Newcastle and the Corporation of Nottingham. The cost was £5,861, and the hospital contained 44 beds. Ten more beds were added in 1784. In 1854 the hospital was added to considerably, the main building being raised a story and the chapel and day wards erected at a total cost of £4,872. In 1878 divisions 6 and 7, adjoining Park Row, containing 51 beds in all, were built.

In 1900 the Jubilee Wing was opened, having been erected by public subscription to commemorate the Diamond Jubilee of Queen Victoria. The wing, which is circular, contains three floors for patients, the ground floor being utilized as cubicles for a portion of the domestic staff, while the basement is used as store rooms, etc. There are in this wing 79 beds, 48 being for male surgical cases and 31 for children.

The further extension of the hospital was delayed on account of the great war, but in 1919 steps were taken to increase the accommodation. The first step was to erect a nurses' home. The cost of this was defrayed by a public subscription as a Nottingham and Notts War Memorial. The total cost was £75,000. There are at present 131 bedrooms, each nurse being provided with a separate room. As the hospital is a recognized training school for nurses, the home is suitably equipped with classrooms, where the

between 1880 and 1919 deaths in quinquennial periods at Guy's Hospital due to peritonitis had increased progressively from 176 to 285; those from gastric ulcer from 0 to 83; from duodenal ulcer from 0 to 38; and from appendicitis from 9 to 91. These increases were the more serious since the standard of food and hygiene had improved greatly during those years, while abdominal surgery had advanced beyond all estimates. If food preservatives were not connected with this serious state of affairs, it was strange that the development of the two things should coincide.

VENTILATION AND HEATING IN FACTORIES.

THE Industrial Fatigue Research Board has issued a report by Dr. H. M. Vernon and Mr. T. Bedford, assisted by Mr. C. G. Warner, entitled "A physiological study of the ventilation and heating in certain factories."[1] Up to recently the investigation of the effect of atmospheric conditions on efficiency and fatigue has been confined to industries in which the atmospheric conditions have been rendered to some extent abnormal, either through the heat produced in manufacture or owing to the technical requirements of the process. In 1923 the Research Board decided to investigate the physiological aspects of ventilation generally. The first report, which was published recently (by H. M. Vernon and others, 1926: "Methods of investigating ventilation and its effects"), dealt with the theoretical side of the problem. The present report contains the results obtained under practical conditions, and has a more direct industrial interest. The authors state that the work of Dr. Leonard Hill has shown that it is not usually the chemical purity of the air in a room that needs investigation, but rather the adequacy of the degree of air movement and the suitability of temperature. The requirements in a workroom are as much air movement as possible without "draughts," and an atmosphere which keeps the head relatively cool and the feet relatively warm. Generally speaking, the air should move in an upward direction. Where possible a natural system of ventilation is preferable to any artificial system. The authors had an opportunity of testing a system of natural ventilation combined with occasional artificial ventilation in a newly built boot and shoe factory at Kettering; and a large part of their experimental work was conducted in this factory. The hot-wire anemometer, the thermopile, and the kata-thermometer were among the instruments used in the experiments. The conclusions are summarized at the end of the report. The investigators are thoroughly in favour of employing natural, as against artificial, systems of ventilation, though they realize that it may be frequently impossible to avoid artificial aids. Natural systems are less expensive, more pleasant, and more healthy. In winter cross-window ventilation is often insufficient, so that some form of exhaust is necessary. The extraction of air should never, in ordinary circumstances, be at floor level, as this increases air movement round the feet of the workers. The investigators favour a height of seven to eight feet above the floor for air extraction, as this increases air movement at the head level of the workers. If natural window ventilation, coupled with moderate fan exhaust, cannot be applied satisfactorily, ventilation must be induced by mechanical means. A plenum system is satisfactory if the hot air is discharged at floor level and not overhead. In dusty processes of manufacture, when floor discharge would be inadmissible, the ducts might be made to discharge against horizontal deflectors a few inches above the floor. The openings of the ducts should not be more than six inches in diameter, in order to avoid draughts. The authors lay the greatest stress on starting the source of heat as near the floor as possible, or under the floor, and keeping the hot air or radiators at a relatively low temperature, in order to avoid a large temperature gradient in the heat of the workroom. In this respect Dr. Vernon and his colleagues cannot sufficiently condemn overhead steam pipes, except when some overhead piping is required for checking down draughts of air from skylights.

[1] Medical Research Council. Industrial Fatigue Research Board. Report No. 35. London: H.M. Stationery Office, or through any bookseller. 1926. 3s. net.

"THE CANCER REVIEW."

WITH a view to increasing the co-operation between clinicians and scientists who are engaged in any form of cancer research, the British Empire Cancer Campaign has begun the publication of a new journal, the *Cancer Review*. It will consist wholly of abstracts and reviews of the current literature dealing with cancer. The management committee, which includes the directors of the Imperial Cancer Research Fund, the Cancer Hospital Research Institute, and the Lister Institute, as well as Mr. Sampson Handley, Mr. Lockhart-Mummery, Professor Lazarus-Barlow, and Dr. Major Greenwood, was under the chairmanship of Sir William Leishman until his death, and Dr. Francis Cavers, the general editor, is assisted by a committee of eight members representing different lines of cancer research. The first number of the new review[1] contains 127 abstracts, which are grouped under the headings: general, experimental and biochemical, clinical and pathological, radiological, and statistical. It is thus rendered possible for each reader to recognize at a glance those abstracts which are likely to be of more particular interest to him. An alphabetical index of authors is provided also, so that the progress of research work in all lands, as shown by the publication of articles, can be watched. The *Cancer Review* will undoubtedly receive a warm welcome from all who are interested in the prevention and treatment of this disease, whether from the standpoint of therapeutics or pathology. It is hoped that through it the co-ordination of the work of cancer research centres throughout the world will be rendered closer, and the danger of overlooking or underestimating the results of individual researches will be substantially decreased. In the short introduction to this first number there is a request that all articles, books, and journals dealing directly or indirectly with the problems of cancer may be sent as they appear to the editor of the *Cancer Review*, at 19, Berkeley Street, London, W.1.

PROFESSOR THEMISTOCLES ZAMMIT was presented, on June 24th, with an illuminated address and his portrait in oils on the occasion of his retirement from the office of Rector of Malta University, which he has held since 1920. Dr. Zammit, who was born in 1864, graduated M.D. at Oxford, and for nearly forty years has been engaged in the service of the Government of Malta as public analyst. He was a member of the Mediterranean Fever Commission in 1904-7, and has held the chair of chemistry in the University of Malta since 1905. He has been curator of the Malta Museum since 1903, and his work in this connexion has received world-wide recognition. He was elected an honorary Fellow of the Royal Anthropological Institute of Great Britain and Ireland in 1919, and contributed in 1924, in collaboration with Dr. Charles Singer, to the *Journal* of the Institute an interesting paper on Neolithic representations of human form found in the islands of Malta and Gozo. He received the C.M.G. in 1911, and the University of Oxford conferred upon him the honorary degree of D.Litt. in 1920. In 1921 he was elected to the executive and legislative councils of the Malta Government. He was a member of the Malta Branch Council of the British Medical Association from 1917 to 1923, when he was elected president of the Branch.

[1] *The Cancer Review*. Bristol: John Wright and Sons, Ltd. Subscription (ten numbers), 30s. per annum; single numbers, 3s. 6d. net; double numbers, 7s. net.

Melicent was the foundress and first sister-in-charge, the hospital being opened in July, 1869. When more room was needed Mrs. Violet Jacoby, mother of Sir Alfred Jacoby, M.P., in 1878 spent about £800 in making the necessary additions. When the removal to Forest House, as mentioned hereafter, took place, the property above described was sold to Sir Charles Seely, Bt., presented to the General Hospital, and connected therewith by a bridge crossing Postern Street.

Sir Thomas Birkin, Bt., having purchased the estate of the late Edwin Patchett in 1899, presented to the committee of the Children's Hospital the house and grounds known as Forest House, which is situated in the healthiest part of the city, stands high, is open on every side, and is very conveniently situated. This valuable gift required a considerable sum to be spent in alteration and adaptation.

In the year 1870 the total income of the hospital was £391, the in-patients for the year numbering 37, the out-patient attendances being 98. To-day the expenditure is approximately £7,600 per annum, the in-patients numbering 600 and the out-patient attendances being approximately 120 a day.

The hospital is equipped with separate modern operating theatres for in-patients and out-patients, with up-to-date *x*-ray plant, ultra-violet ray lamps, and massage and electrical departments.

As the present premises are inadequate and somewhat out of date, a new hospital is being erected by the generosity of Mr. and Mrs. J. D. Player. Unfortunately the building is not completed, but it will be sufficiently far advanced for inspection by those attending the Annual Meeting of the British Medical Association in July. When completed the building will accommodate about eighty in-patients, and will be equipped on the most modern and up-to-date lines. The design is the work of Mr. J. Rigby Poyser, L.R.I.B.A., architect, of Nottingham, in consultation with Dr. D. J. Mackintosh, C.B., of Glasgow. The out-patient department is to be considerably increased and the old house modernized; this will make an admirable residence for nurses and staff.

NOTTINGHAM AND NOTTINGHAMSHIRE HOSPITAL FOR DISEASES OF THE THROAT, EAR, AND NOSE.

This hospital, in Shakespeare Street, was founded in 1888 by the late Dr. Donald Stewart. It has a very large out-patient department, between 2,000 and 3,000 new patients being seen every year. There are 14 beds, which are kept continually occupied; nearly 400 operations are performed there annually. The board of this hospital was one of the first to realize that tonsil and adenoid operations should be kept in hospital for at least thirty-six hours after the operation is done. Patients pay a small sum towards the upkeep of the hospital, which is also supported by voluntary contributions from private friends, workmen's clubs, etc.

NOTTINGHAM UNIVERSITY COLLEGE.

The foundation stone of the University College was laid on September 27th, 1877, by the Mayor, Alderman J. W. Bowers. The College was opened on June 30th, 1881, by H.R.H. the Duke of Albany, and the first session began on October 1st of that year. All provision for the higher education of adults was gathered into the College, and facilities for day and evening studies were afforded to all without distinction. The College was affiliated to the Universities of Oxford and Cambridge in 1883. From its foundation until 1903 it was governed by a committee of the town council. On August 27th of that year a Royal Charter of incorporation was granted, vesting the College in a court of governers consisting of the City Council, with a president and vice-president elected by them.

The present technical schools were opened on January 12th, 1893, by the Master and Wardens of the Drapers' Company of the City of London.

New university buildings are now being erected in University Park, at a cost of £250,000. This has been made possible by the great generosity of Sir Jesse Boot, Bt., who has not only provided the site and very large sums towards the cost of the buildings, but has given to the city and laid out at a cost of hundreds of thousands of pounds the park itself, which provides a beautiful setting for the new buildings.

The College prepares for degrees of the University of London, and for diplomas in commerce, social study, geography, chemistry, pharmacy, physics, education (elementary and secondary), engineering, mining and mine surveying, hosiery manufacture, and dyeing and finishing. It is divided into four faculties: the Faculty of Arts, including departments of English, history, classics and philosophy, modern languages, education, extramural education, and music; the Faculty of Economics and Commerce, including the departments of law and social study; the Faculty of Pure Science, including the departments of chemistry, metrology and physics, mathematics, biology and bacteriology, geology and geography; and the Faculty of Applied Science, including the departments of engineering, technology, mining, and textiles.

There are four halls of residence connected with the College: Mapperley Hall and Waverley House for men, Cavendish House and Hollygirt for women. During the session 1925-26 there were 722 day students and 2,036 evening students in attendance. The social side of the College is in the hands of the students' "Union," which has the control of all clubs and societies. The tennis ground, with ten courts, is situated in Elm Avenue, and the athletic ground in University Park, where provision is made for cricket, hockey, netball, tennis, and football (Rugby and Association).

The Scientific Sections of the Annual Meeting of the British Medical Association will meet in the theatres, classrooms, and laboratories of University College.

LONDON HOSPITAL MEDICAL COLLEGE.

PRIZE DISTRIBUTION.

THE distribution of prizes to students of the London Hospital Medical College and Dental School took place, as briefly announced in our last issue, on June 28th. The Chairman of the College Board, Lieut.-Colonel W. MARLBOROUGH PRYOR, presided, and the proceedings began with the reading by the DEAN (Professor William Wright) of his report on the work of the college during the past year. In noting some of the principal honours and distinctions won by past and present students and members of the staff, the Dean mentioned that a very distinguished son of the London Hospital, Sir Neville Howse, V.C., a former Minister of Education and Health in the Australian Government, had just been appointed by that Government to be its High Commissioner in London. A year ago he had been able to announce that during 1924-25 the college had received three donations each of £10,000, to be applied respectively to the promotion of medical research, the building of a new clinical theatre, and the reconstruction of the Pathological Institute. The present year had been signalized by a munificent gift from an anonymous donor of £50,000, which had been applied to the endowment of a "Freedom Research Fund," the whole of the income being devoted to medical research. With the new hostel for resident medical officers, and the prospective building of a new cardiological department, the year 1926 would take its place architecturally also as one of the most important and eventful in the history of the London Hospital.

Address by the Minister of Health.

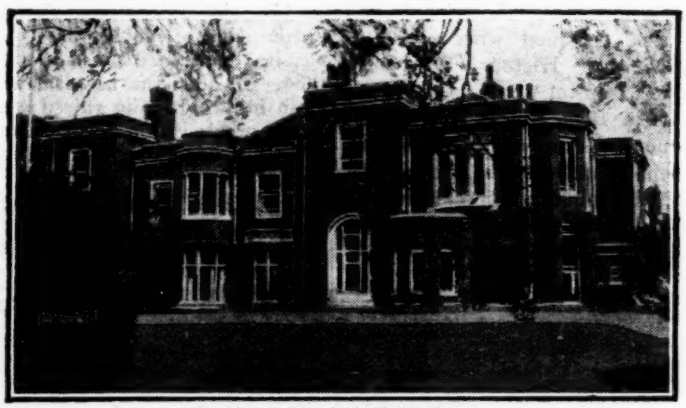
The Right Hon. NEVILLE CHAMBERLAIN, Minister of Health, after distributing the prizes to successful students, gave an address on the organization of medical services. After touching on the great variety of choice and great diversity in the possible careers of those who had studied at the hospital, he thought there would nevertheless be amongst them all many common thoughts, common ideals, and common associations which would, in spite of everything, preserve in them a spirit of comradeship. Above all, there would be that attitude of mind which, as he sometimes thought, distinguished members of the medical profession from ordinary people and made them, to a

probationer nurses receive two months' preliminary training under a tutor sister before entering the wards. There are also recreation and sitting rooms for the sisters, staff nurses, and the nurses in training, and hard and grass tennis courts are provided. The home, which may be considered one of the most modern of its kind in the kingdom, was opened by H.R.H. the Prince of Wales on August 1st, 1923.

The new buildings now in course of erection at the corner of Park Row and the Ropewalk, known as "the Ropewalk Wing," consist of a new out-patient department, with large waiting hall, consulting rooms, etc., new *x*-ray, orthopaedic, electrotherapeutic, and massage departments, together with operating theatres and 40 beds for ear, nose, and throat cases. The total cost will be about £90,000. The buildings communicate with the hospital by a subway under Park Row. The heating, lighting, etc., will be supplied from the present hospital plant. Although it will be some months before the premises are in actual use, they are sufficiently advanced in construction to be fit for inspection.

NOTTINGHAM AND MIDLAND EYE INFIRMARY.

It was not until 1859 that, with the growth of the mining and textile industries, Nottingham decided to provide itself with a special institution dealing with affections of the eye, and the Eye Dispensary was opened in Parliament Street. In earlier times sufferers used to bathe their eyes with the waters of certain local springs and wells, hence the name "Rag Spring." This first institution was soon found to be too small, and within a few months a move was made to St. James's Street; here it assumed its present title, and secured the services of Dr. Bell Taylor as one of its first honorary surgeons, an association which remained unbroken till his death fifty years later.



Children's Hospital, Nottingham.

In 1860 six beds for the treatment of in-patients were added, and good work was done in what would now be regarded as hopelessly insanitary surroundings, until, in 1912, a handsome new building was erected on the Ropewalk. Even this has recently had to be extended, and now includes a wing of paying beds for those unable to afford the usual nursing home charges, in addition to the forty ordinary beds. It is well equiped with modern appliances, such as the giant magnet, slit-lamp, etc. It draws on a population extending as far as Skegness in the east and Burton-on-Trent in the west, and deals with about 700 in-patients and 30,000 attendances yearly.

COLLIN'S TRUST MATERNITY HOSPITAL.

This hospital, in Waverley Street, takes its name from Abel Collin, a generous citizen of Nottingham, who lived in the reign of Queen Anne. The hospital was started by the trustees of his charity with funds which they allocated for the purpose, aided by a grant from the Ministry of Health, as, apart from the wards in the Poor Law hospital and nursing homes, there was no maternity hospital in Nottingham. The project was under consideration before the war, but it was not until near its end, when the need of safeguarding the pregnant mother and her child became more urgent, owing to housing and other difficulties, that a small beginning was made by the purchase and equipment of a house in Waverley Street to admit 12 mothers and 12 babies. There, since June, 1919 (the first case to be admitted was for contracted pelvis and had Caesarean section performed), with many difficulties owing to limited accommodation, the work has been carried on, including ante- and post-natal clinics and training of midwives, the hospital having been recognized as a training school by the Central Midwives Board since 1920. After many delays a new hospital at "The Firs," Sherwood, for 32 mothers and 32 babies, has been nearly completed, and when funds permit it will be possible to extend the accommodation so as to admit 60 mothers and 60 babies, as was planned in the original scheme.

NOTTINGHAM HOSPITAL FOR WOMEN.

This hospital was opened in a private house in Castlegate nearly fifty-one years ago. The real founder was Miss Catherine Woods, a great-aunt of the present Bishop of Winchester. She had been brought up in Quaker traditions of usefulness to her kind; and it was while visiting in the wards of the General Hospital that some of the women patients gave her the suggestion of a small, homely hospital for women only. Perhaps then—we do not know—as in other hospitals of the time, the babies and children were nursed in the women's wards. At all events there arose between those unknown women and Miss Woods the idea of a hospital on lines which have now become those of the most modern of these institutions. There were to be no recommendations, and therefore no temptation to admit a patient for any reason other than her need and fitness for treatment. Those who wished to befriend a patient could pay her modest fees for a part or the whole of her stay.

To complete the anticipation of modernity, some years later a private department was begun. These patients under the care of the hospital staff paid a sum covering the full cost to the hospital, which made no profit out of them. The nursing home had not yet been born in Nottingham, and these private beds have been an unspeakable boon.

Meanwhile the Samaritan Hospital for Women was started in Raleigh Street in 1885, and has for thirty-nine years done a great amount of splendid surgical work. In 1924 the two hospitals contracted a happy marriage, and their life under one roof waits only for the building of the new hospital. Last year 537 in-patients were treated in the combined hospitals, with 531 operations. Out-patients numbered 8,528, of whom 2,112 were new.

For many years a building fund had slowly been accumulated, and some years ago an admirable site with a good house in Peel Street was purchased. The site is central, yet, overlooking the Arboretum, sure of quietude and fresh air. It is let to a nursing home until the hospital is ready to build. The committee now waits only for a little better times to complete the plans and to appeal to the public to help those who have worked hard to help themselves.

NOTTINGHAM CHILDREN'S HOSPITAL.

The institution of a children's hospital must be placed to the credit of a noble band of philanthropic workers who were intimately associated with the management of the Nottingham General Hospital, and who, about 1869, came to the conclusion that the provision for free medical treatment of children suffering from various ailments and diseases was altogether insufficient. Probably the Rev. and Hon. C. J. Willoughby, rector of Wollaton, should be placed first, then the Rev. Henry Seymour, rector of Holme Pierrepont, and associated with them was the Rev. James Matheson, minister of Friar Lane Chapel, Mr. Abraham Cam, solicitor, acting as honorary secretary, Mr. T. C. Hine being the architect.

After deliberation they decided to purchase the house of the late Alderman Knight in Postern Street and Amberley Street, which was altered and adapted. Sister Mary

to occur from time to time. The medicine of to-day was very different from that of fifty years ago. But although there would be a reframing of the curriculum, there would be no extension of its length. In conclusion, Lord Dawson said that there never was a time when medicine presented a wider outlook of interest and usefulness. Those on the threshold of their careers would long remember that occasion and recall the gratitude felt by them all to Mr. Chamberlain for his presence and the vision and inspiration of his speech.

In acknowledging the vote of thanks, Mr. CHAMBERLAIN said that Lord Dawson always brought to the consideration of any question, not only his great professional ability and experience, but also a width of view and a statesmanship which made him simply invaluable to the Ministry of Health. As for Lord Knutsford, the popular idea was that he owned the London Hospital! It was certainly true that he had provided most of the capital for it. When he had got his £100,000 an unremunerative but useful position would be open to him as liaison officer between the Ministry of Health and the Chancellor of the Exchequer. (Laughter and cheers.)

Union of South Africa.

[FROM OUR CORRESPONDENT IN CAPETOWN.]

THE 1926 CENSUS.

THE preliminary results of the census recently completed have been published. Since 1921 the white population of the city of Capetown has increased from 55,000 to 60,000, while the non-European increase is from 51,000 to nearly 59,000. The inhabitants of Greater Capetown, which comprises Capetown proper and suburbs, excluding the separate municipalities of Wynberg and Simonstown and certain smaller areas which have their own local governing boards, now number 208,709, compared with 185,763 in 1921. That the non-European element has increased more rapidly than the European is proved by the fact that the rise in the white population amounts to 9,000, as compared with 14,000 in the case of the coloured community. The preliminary figures for Kimberley show that since 1921 the white population has decreased by 1,409, the respective totals being 21,607 and 20,198. At Stellenbosch, on the other hand, a remarkable increase in the European population of the district has occurred, from 11,411 in 1921 to 13,188 (males 6,596, females 6,592). The town of Stellenbosch numbers 4,422 Europeans as against 3,701 five years ago.

HOSPITAL NEEDS OF CAPETOWN.

At a meeting of the Cape Hospital Board on May 26th a memorandum by the chairman, Mr. M. C. Vos, was submitted dealing with certain points raised in a resolution recently passed by the board calling for investigation into means of extending hospital accommodation and treatment while awaiting completion of the proposed new general hospital at Groot Schuur. The matters dealt with in the memorandum may be classified as follows: Out-patient departments and free dispensaries; district nursing service; extension of existing hospital accommodation; convalescent homes; and new maternity home.

The memorandum points out that there are in existence out-patient departments at the New Somerset Hospital and at the Woodstock Hospital, as well as the Capetown Free Dispensary. To all intents and purposes only the urban area proper and the immediately adjoining suburbs of Woodstock, Salt River, and Observatory are thus catered for. It is proposed, therefore, to establish a new dispensary at Wynberg, and, if possible, another at Claremont. Even more urgent is the claim of a very large area comprising the suburb of Maitland and its neighbourhood, where there is a large poor community. To meet the expense involved it is suggested that the Provincial Administrator be requested to sanction a loan, failing which certain moneys belonging to the Capetown Free Dispensary for capital expenditure exclusively—about £5,700—be drawn upon, provided some agreement can be arrived at with the committee of the Free Dispensary. The District Nursing Service consists of eight district nurses working under the charge of a superintendent of district nurses. The necessity of devising some means for making the service as effective as possible is another subject to be considered, but whether by increase in the number of nurses or by redistribution of areas supplied is not stated. The new General Hospital, which in the first instance is to contain 300 beds, to be increased later to 500, will not be completed for at least five years, at the expiration of which period it may prove to be inadequate to supply the needs of the by then greater population. The solution of this problem would appear to be the immediate increase in the number of beds at the existing hospitals under the control of the board. The ward in which the male V.D. patients are housed at the New Somerset Hospital is in a sad state of dilapidation, and should be closed, cleansed, and renovated. To provide for the efficient treatment of such patients negotiations are already in progress with the medical officer of health for the city with a view to the necessary accommodation being provided at the City Hospital, where, too, clinical teaching to students will be carried on. A proposal to provide a new casualty ward at this hospital, at an estimated cost of £1,200, is under consideration. More extended additions to it are not contemplated, however, as the buildings are eventually to be demolished. At the Woodstock Hospital, by utilizing the nurses' quarters at present situated in the hospital building itself, and providing additional accommodation in the nurses' home, an addition of twelve beds may be reckoned on. At the Rondebosch Hospital two new wards for non-European patients have already been erected. When these are occupied the quarters vacated could be made to furnish twelve additional beds. The suggestion has been made to build at the Wynberg Hospital an entirely new block for coloured patients with accommodation for thirty beds, and adjoining it a new ward with ten beds for coloured children. Part of the existing building might then be utilized as quarters for the house-surgeon, an office recently created, and also for a dispensary. The net increase in beds under this scheme would be twenty-two, entailing an expenditure of about £5,000. The Simonstown Hospital is adjudged large enough for its present requirements, serving as it does an outlying district with a limited population. With regard to convalescent homes, it is recommended that beds should be added to those at present existing, and that an adequate staff of trained nurses should be provided so that cases requiring further treatment may be transferred from the hospitals to make room for more urgent cases. The average stay of patients at the New Somerset Hospital should in this way be reduced from thirty-two to eighteen or twenty days. The erection of a new building at the Eaton Convalescent Home to accommodate from thirty to forty cases is contemplated. Lastly, while in no way intended to compete with the new maternity block at the hospital to be erected on the Groot Schuur site, the provision of a new maternity home in District 6, the slum quarter of the city, is an urgent need, and should be used for the training of midwives.

Speaking generally, the proposals suggested to relieve the present congested state of the hospitals and provide additional accommodation, etc., will involve an expenditure of approximately £20,000, and in this way the period of five years until the new hospital is built would be tided over. At the same time it must be borne in mind that these additions will be of a permanent nature and will be required to meet the demands of a growing population. As the New Somerset Hospital has been sold for £100,000, and as it would be possible to raise this money immediately from the Provincial Administrator, the chairman, with reference to his memorandum, suggested that a portion of this sum should be utilized to enable the board to proceed with the improvements outlined.

APPOINTMENTS.

Dr. Robert Sharp, honorary medical superintendent of the Woodstock Hospital, has been appointed acting medical superintendent of the New Somerset Hospital, in a part-time capacity, at the salary of £1,000 per annum. Dr. Sharp is to devote four hours a day to the duties of the

certain extent, a people apart. No one who had been in intimate contact with any practising surgeon or physician could doubt his fundamental seriousness of outlook. He did not mean that doctors had no sense of humour: God forbid! their worst enemies had not accused them of that; but inevitably there must be in them a serious vein. They must feel that their calling was something beyond a mere means of earning one's livelihood, that they had a purpose in life which was neither selfish nor superficial; and as far as he had been able to observe it, without an exception practically, they conscientiously strove to achieve that purpose. And so he could not help feeling that, in speaking to medical students, he was addressing men who would be inclined to listen sympathetically to any consideration of the problem which lay before a Minister of Health: a problem not concerned with the cure of the individual, but rather with the much wider task of trying to improve the general health of the people. There were a good many factors at work in the solution of that problem, and every student, no matter what branch of the profession he took up, could give a helping hand to the Minister, and make his contribution towards the solution of this problem. Take, for instance, the prevention of disease; in many cases the conditions of life—not in the big towns alone, but in the smaller villages, and even right in the country—were simply manufactories of disease; and while certainly everything possible must be done to combat the results, it would be at once cheaper and more effective if the source of the trouble could be destroyed. Then, again, how important it was to ensure the early detection of disease and the right treatment of its first beginnings. The doctor who had completed his studies at college or medical school should not think that thereby he had finished his education; it was only too easy, in the remoteness perhaps of a country practice, to get behind the times, to get out of date, to acquiesce in a certain lethargy, when there was but little competition and hardly any criticism. Again, medical knowledge nowadays had got so wide and so complicated that it was more than any one man could possibly assimilate, so that treatment, to be complete, should be a matter of team work. And, still from the point of view of the Minister of Health, hardly too much stress could be laid upon the continual prosecution of research. But research was not one of those things which lent itself to mass production.

In conclusion, Mr. Chamberlain said that his object in making these remarks was to bring to the minds of those who were beginning their careers the idea that they had something more before them than the treatment of individual cases; that, in fact, whatever branch of the profession they might adopt, they were all parts of a great army whose objective lay beyond the section of the enemy immediately in their face. The process which he, as Minister of Health, at the present moment was trying to advance was an endeavour to make better use of the forces at their disposal. The organization of medical services in this country was far from perfect. The heavy artillery, in the shape of institutions, was not only inadequate in quantity, but often badly sighted. The intelligence was understaffed, and the results were not always available to the fighting units. There was insufficient co-operation between commanders, and the rank and file were not always in complete touch with their officers. It was the task of the Minister of Health to try to remedy these defects; to correct anomalies; to adjust the machinery, so that it might be better adapted to changing conditions. That was a difficult and sometimes painful process, and so the Ministry was subject to frequent criticism. He hoped that his hearers, as they went through life, would take a broader view; that they would sympathize with the Minister, whether it be himself or his successor, who was struggling against inertia and against prejudice, against want of faith and want of money, and that they would try in their respective spheres to lend him a helping hand. With that idea in the back of their minds they would find their own life more interesting and their own work more satisfactory, because they were not only doing the work which immediately lay before them but contributing also in their own way to the general benefit.

Lord Knutsford on the Hospital's Ideal.

Lord KNUTSFORD, in proposing a warm vote of thanks to Mr. Neville Chamberlain, said that those to whom he had given the prizes were recruits in the work which he had made his own. As chairman of the hospital he entirely sympathized—they all did—with what Mr. Chamberlain had said: that their duty did not end with simply curing the sick people in their wards who came to them for help; they had to try to find out the causes of sickness, and their work in this direction had only been limited by their means. The ideal of the hospital was not to increase its beds, but to make that terribly long waiting list impossible—to make the beds unnecessary because they had tackled disease at an earlier period and the vast community they served would not need the hospital as much as it did to-day. Until 1924 they despaired of being able to do any preventive work at all. That great hospital, the largest in the country, had only £25,000 for the endowment of medical research. But since then a change had come. The Dunn trustees had given beautiful laboratories: Mr. Williams had helped to endow them. Lord Bearsted had given a clinical theatre with a lectureship attached; and Mr. Bernhard Baron gave the pathological institute, which would soon be built. Lastly they had the magnificent donation from the "Freedom Research" donor, to which the Dean had referred.

Lord Dawson on Medical Practice of the Future.

Lord DAWSON OF PENN, physician to the hospital and chairman of the Medical Council of the College, in seconding the vote of thanks, said that the Minister had pointed out in the course of his interesting speech the changes that were coming over medicine, or rather, in the practice of medicine. And it was true, both as regards hospitals and as regards practitioners, that those changes were likely to be wide and deep. The hospital, or rather teaching hospitals, whatever changes might befall them, as long as they clung to the ideals by which they had become great, were likely to live, to stand for the welfare of the country in the same sense as they had done in the past. They would remain, as now, national institutions. It was interesting to reflect that certain changes would take place in the methods of practitioners' work. The centre of gravity was drifting away from disease and towards health. The doctor of the future would study early disturbances of function. His time would be concerned more with the threshold of disease. And, further than that, in addition to his work with individual patients, he would probably be thrown in contact with groups of people resembling each other, either in their attributes or their occupations. Apart from clinics, which were multiplying the land over—for example, those that concerned school children or maternity or tuberculosis—it seemed to Lord Dawson inevitable that there would be a large development in industrial medicine. It was inconceivable that the employers of labour could do anything but increase medical services in connexion with their large businesses, not only to the advantage of their employees, but to the economic advantage of themselves. That opened up a field of great interest. The doctor would have to concern himself with the lives of the people he had to look after; he would study them in relation to their work and in the environment of their employment, and an indirect result would be a diminution of practice in the surgery and the home. In short, the doctor would gradually move towards the study of the beginnings of disease and curative medicine. Apart from gratitude to the Minister for coming there that day to give them his encouragement, they valued his presence as an emblem of the unity of medicine. Another way in which medicine must alter was by an increase of clinics and hospitals; institutional provision for the sick would increasingly supplement the care of the sick in their homes. In that connexion, it seemed important for each to think out the functions that he would perform in these institutions. Primary hospitals of the future would play an important part in every local community, and doctors who practised in that community should have access to them. It might be asked, Did not all this mean changes in the curriculum? Changes in the curriculum were bound

were appointed to serve on the Special Committee to consider the report of the Royal Commission on the Insurance Acts. A new standing committee on public health was formed to watch public health developments, including posts advertised. An invitation to hold the next meeting of the council at Leeds was accepted. On June 17th Miss Ivens gave a dinner at the Welbeck Palace Hotel, and on the 18th a lunch was given at the London School of Medicine for Women by the dean, Lady Barrett, at which many of the women members of the school and hospital staff were also present. On the evening of the 18th a conversazione was held by the London Association of the federation in the Hastings Hall of the British Medical Association House. Sir James Berry gave a lecture on Greek temples in Sicily, and Lady Berry described scenes and episodes of travel in various climes, under the heading "Scattered recollections." Both lectures were illustrated by lantern slides from photographs taken by Lady Berry.

Birmingham Mental Hospitals.

The Asylums Committee at Birmingham is reviewing the administration of the institutions under its control, and has recently submitted a scheme for greater unification to the Board of Control. It is proposed to make Dr. T. C. Graves, medical superintendent of the Rubery Hill and Hollymoor Mental Hospital, chief medical officer of the various institutions, though he will continue to reside at Rubery. Dr. Forsyth, assistant superintendent at Rubery, becomes medical superintendent at Winson Green, a position now vacant by the retirement of Dr. Cecil Roscrow after twenty-three years' service. Dr. Elizabeth Selkirk, for many years on the staff at Winson Green, has been appointed medical officer in charge of Hollymoor, and so becomes the only lady superintendent of any large mental hospital in this country. The three mental hospitals have about 2,250 patients under their care.

Sterilization of Mental Defectives.

The Mental Hospitals Committee of the London County Council has considered a resolution which has been adopted by the Worcestershire County Council urging the Government, in view of the increase in the number of mental defectives, and the heavy cost of maintaining and extending institutional treatment, "the effect of which is usually most unsatisfactory," to take such compulsory measures as it might deem best for preventing the spread of this condition by sterilization, by compulsory segregation, or by other measures. The London Mental Hospitals Committee states that it has more than once considered whether sterilization by surgical operation might be resorted to as a prophylactic against mental deficiency, but it had concluded that there were too many practical difficulties to permit of the endorsement of any proposal to make such a measure possible. That was still its opinion. So far as compulsory segregation was concerned, this was available at present in certified institutions for cases that could be dealt with under the Mental Deficiency Act. The committee is not aware of any serious justification for the opinion that the effect of institutional treatment is usually most unsatisfactory, and adds that it is difficult to see what other measures are ever likely to be enforceable.

Leeds School of Dentistry.

Twenty-one years ago the members of the Leeds and District Section of the British Dental Association decided to start a dental hospital for the treatment of patients who could not afford to pay fees and for the training of dental students. The hospital was equipped through the generosity of these dental surgeons and their friends, and was carried on for some years in the public dispensary, but as its work grew it became necessary to find new premises. This was made possible by two other public bodies—the authorities of the General Infirmary, who made room for part of the work, and the board of guardians, who provided accommodation in the East Leeds Infirmary for the rest of it. A few years later this latter portion of the work was transferred also to the General Infirmary, in which the whole of the activities of the dental hospital and school have since been carried on. With the expansion of the hospital the training of dental students has also increased, and the institution now forms a combined dental hospital and school of great value to the county. There are now fifty-three students undergoing training in the school, and during last year 9,210 patients received treatment, entailing 28,350 visits. At an early stage the dental committee in charge of the hospital came to an arrangement with the university by which students could read for a degree or a diploma in dental surgery by combining courses in the university with their practical work in the hospital. In 1914 this arrangement was developed into a scheme of amalgamation by which the dental school became a department of the university within the Faculty of Medicine. The university now takes full responsibility for the whole of the educational work of the school, while the hospital work forms a department of the General Infirmary. For some time it has been clear that new premises would again have to be provided. The provision of a building for this department had therefore to be included among the urgent needs in respect of which the university issued its appeal for £500,000. A site, valued at about £8,000, has been provided by the General Infirmary authorities, the Dental Board of the United Kingdom has promised a grant of £5,000 contingent on the balance of the cost of the building being obtaned from other sources, the honorary staff of the dental school have subscribed £2,000, and contributions have been received from other dental surgeons. The building, which will provide accommodation for 150 students and pupils, is to occupy a site on the north side of Blundell Street, adjacent to the medical school and the General Infirmary, and conveniently situated for the university.

Scotland.

Victoria Infirmary, Glasgow.

The thirty-eighth report of the governors of the Victoria Infirmary, entitled as hitherto "annual," covers on this occasion a period of fourteen months, terminating December 31st, 1925, the financial year previously ending October 31st having been altered to coincide with the calendar year.

The total number of cases admitted during the period was 5,001; the mortality, excluding deaths within forty-eight hours, was 5.8 per cent. There were in addition 4,494 minor surgical cases, including accidents, and 2,268 patients were treated for diseases of the throat and nose. The average daily number of patients was 288, and the average length of stay in hospital 23.8 days. Contributions received from patients in recognition of services rendered amounted to £686. Employees' contributions for the year to December 31st totalled £11,006. The Bellahouston Dispensary, in a populous district of the south side of Glasgow near the docks, treated 37,661 patients for diseases of the eye, ear, nose and throat, and skin, as well as for medical, surgical, and gynaecological ailments. This dispensary, which does so much for a crowded neighbourhood, should receive more financial aid from local sources. Progress is being made with the new wing of the infirmary, which, when opened, will involve an additional annual expenditure of £14,000. The governors have purchased a piece of ground at Thorntonhall, in the country near Glasgow, for an auxiliary hospital. These extensions are amply justified by an average waiting list of 450. The Victoria Infirmary continues to render notable service to the community and merits every support.

Glasgow Ear, Nose and Throat Hospital.

The annual general meeting of the Glasgow Ear, Nose and Throat Hospital was held on June 9th. Dr. Robert T. Moore, Lord Dean of Guild, who presided, said that Glasgow had one of the best equipped institutions of this kind in the United Kingdom, but an annual income of £7,000 was required to carry on the work. One of the directors, who desired to remain anonymous, had given an adjoining building to the institution. Dr. R. M.

office. Owing to the fact that, for the time being, he is a paid official of the Cape Hospital Board, Dr. Sharp has had to relinquish his seat on the board, his membership of the committee of the Woodstock Hospital, and also his appointment as honorary medical superintendent of the last-named institution. Dr. Z. J. de Beer has been appointed district surgeon for the area of Woodstock in succession to Dr. Robert Sharp. Major F. W. Cluver, South African Medical Corps, has assumed command of the Wynberg Military Hospital, vice Major van der Spuy, who has been promoted to command of the military hospital at Roberts's Heights, Pretoria.

GOLF.

The competition for the Jones-Phillipson cup, held under the auspices of the Cape of Good Hope (Western) Branch of the British Medical Association, and open to all medical men resident in the area, was decided on the course of the Royal Cape Golf Club on May 19th. The winner proved to be Dr. W. P. Mulligan, who returned a net score of 77. The competition was first held in 1923, when a floating trophy was presented by Mr. C. E. Jones-Phillipson, then president of the Branch. The first holder was Dr. G. B. Wilkinson of Seapoint; in 1924, and again the following year, Mr. E. Barnard Fuller, a past president of the Branch, carried off the honour.

England and Wales.

A SUSSEX ORTHOPAEDIC CENTRE.

ON the day following the inauguration of the Welsh Branch of the Central Committee for the Care of Cripples (see p. 79) a party of about fifty medical officers of health and other representatives of local authorities in Wales paid a visit to Chailey in Sussex to inspect the Heritage Craft Schools and Homes for Crippled Children. Sir Robert Jones, who is chairman of the medical board at Chailey, and Sir John Lynn-Thomas, the honorary secretary of the newly formed Welsh organization, acted as hosts. The visitors were received by Mrs. C. W. Kimmins, who founded this work more than twenty years ago and is now its honorary secretary, and by Dr. Murray Levick, the medical director. The schools, which contain 150 boys and 70 girls, rose to the occasion, the Welsh dragon fluttered at every point of vantage, and the cripples—a brave deed, since they were English—delighted their guests by singing Welsh songs. There was much to see, and hardly time to appreciate the glorious scenery, between the east and west downs, in which Chailey is set. The hospital block, provided by Sir Jesse and Lady Boot, with the wards, open-air balconies, and light-treatment rooms planned in a single unit, was first visited. The combined method of treatment which is given was demonstrated by the staff. Dr. Murray Levick mentioned also some good results which had been obtained in infantile paralysis, even in muscles which gave no response to the interrupted galvanic current. The treatment consisted of general irradiation by "artificial sunlight" (or by real sunlight when this was available), local treatment of the affected muscles by rays from long-ray lamps passed through red filters, electrical treatment, re-education of the voluntary stimulus, and instrumental support for the paralysed muscles which, often at an early stage, can be abandoned, and, finally, massage. Out of doors, stretched on canvas couches, the children were seen receiving their sun treatment, combined with school lessons, the prone and supine positions being alternated at regular intervals under the direction of a nurse while the lessons proceeded; in the gymnasium some boys suffering from advanced kyphosis were taken through physical drill and deep-breathing exercises. The visitors were also bidden to admire the craft work produced in the Lord Llangattock workshops, where the cripples are taught the subjects of the elementary school curriculum as far as possible through the medium of their craft, working in wood as other children work in copybooks. After a visit to the beautiful little church, where a tablet records the names of a considerable number of ex-patients from Chailey who served in the war, the party went to the girls' school on the other side of the common, where, on the lawn, Miss Margaret Morris illustrated her system of exercises which has been selected as most suitable for the crippled girls. Here also children of quite tender years, as young as 2, were shown receiving sun baths. The party then journeyed to Lewes for luncheon, at which messages welcoming the Welsh visitors were read from the patron, H.R.H. Princess Louise, the Bishop of London, the president, and Sir George Newman, K.C.B., M.D. Two Labour members of Parliament for South Wales, Colonel Watts Morgan and Mr. William Jenkins, expressed the thanks of the visitors to Sir Robert Jones and Sir John Lynn-Thomas for an interesting day, and said that they and others would not rest until they had in the principality some equivalent to Chailey. Sir Robert Jones said, in response, that Chailey might be called the public school of crippledom in this country, and everyone who came within its influence went out to preach its gospel. Sir John Lynn-Thomas, who also spoke, mentioned that it was while he was stationed in the South of England during the war that some part of this work—that at Tidemills, which was to be visited later—came under his observation, and stirred an enthusiasm within him which had never died down. In the afternoon, before returning to London, the visitors proceeded to the marine annexe at Tidemills, and saw how the principles of combined school and cure were being applied.

MEDICAL WOMEN'S FEDERATION.

The annual general meeting of the Medical Women's Federation was held on June 17th, under the chairmanship of Miss Frances Ivens, the retiring president. It was agreed that £100 should be given to the Dame Louisa Aldrich-Blake memorial fund as a contribution to the proposed scholarship fund. The federation was asked to invite contributions from its members, the whole sum collected to be handed over to the memorial in the name of the federation. Dr. Christine M. Murrell was elected president, Dr. Ellen B. Orr and Dr. Clara Stewart vice-presidents, and Dr. Jane Walker honorary treasurer in place of the late Dame Louisa Aldrich-Blake, who had held that office since the foundation of the federation. These, together with Miss Frances Ivens, Lady Berry, honorary secretary, and Miss Mabel Ramsay, elected from the council, compose the executive committee for the coming year. Dr. Frances Braid of Birmingham reported that a bed at the Taylor Memorial Home for Incurable Diseases had been dedicated to the memory of Dr. Mary Sturge as a memorial from the federation. The aviation subcommittee reported that the various qualities which produced the "flying aptitude" were found in women as in men. It had specially considered the question of menstruation and pregnancy in relation to women's fitness for flying and for receiving aviation certificates. In this connexion it had examined the results of recent research into the effect of menstruation on the various processes of the body, especially the work at the London School of Medicine for Women, under the direction of Professor Winifred Cullis, which showed that there was no change during menstruation in basal metabolism, pulse rate, or blood pressure, and also that the cost to the organism of a certain amount of work and the recovery rate from work was the same both during menstruation and the intermenstrual time. The subcommittee had concluded that normal menstruation was no bar to flying, and considered that the searching and repeated medical examinations already in force in regard to those holding certificates would be sufficient to prevent unfit persons from undertaking flights.

The national corresponding secretary of the Medical Women's International Association reported that the medical women of Canada, and still more recently those of Mexico, had formed associations which had joined the International Association. She reported the rapid growth of the German Medical Women's Association, which now numbered 650 members, issued a quarterly journal, and published a list of members with the type of practice undertaken by each. A meeting of the council of the International Association would begin on August 26th in Prague. At the request of the British Medical Association Miss Mabel Ramsay and Miss Louisa Martindale

I have treated three other severe cases since, with equally good results, and two milder cases. The one failure was a gentleman of 74, who improved so much after two weeks' treatment that he gave it up for five weeks and refused to attend regularly, having six more treatments at intervals. Recently he had a recurrence and died, but the treatment was incomplete and very unsatisfactory, and this in no way negatives the success in those cases who received sufficient treatment. These results certainly justify an extended trial of this method, which is convenient, simple, and, in experienced hands, absolutely safe.—I am, etc.,

JOHN N. DYSON, M.R.C.S., L.R.C.P.

Southport, Lancs, July 4th.

A PLEA FOR OPHTHALMIC EXAMINATION IN INFANCY.

SIR,—Many common refractive errors and visual defects are either congenital (that is, present at birth and of no earlier origin than conception) or hereditary (that is, reproduced from ascendants during development or life). Some improve. A few remain stationary. Others, from inherent tendency or adverse environment, deteriorate. For lack of fostering in infancy, visual faculties may fail to develop. Many older children find their preparation for attractive careers arrested, owing to processes which might have been foreseen, if not prevented.

So dimly are these facts realized by the laity that an infant's eyes are rarely examined unless there is some glaring defect. Damage is often done before intervention is possible by public bodies, which have shouldered enormous burdens in respect of the treatment of visual defects. An observant family practitioner is in a unique position with regard to those children he has known from infancy; is it not his duty to initiate, not later than the third year, such steps for the preservation of vision as experience dictates?

Congenital distortion of the cornea (astigmatism) interferes with the development of the form sense. Children with over three dioptres of astigmatism rarely see well until glasses have been worn for some time. The first indication that a high degree of astigmatism is present may be the onset of nystagmus. Hypermetropia is also congenital, and as sustained accommodation without convergence is fatiguing an illness such as measles may be followed by squint. Squint impairs children's prospects, gives anxiety to parents, and causes loss to school authorities whose grants are based on attendances. The vision of a squinting eye deteriorates and nature adapts structure to function in the extraocular muscles, hence the treatment is tedious. It is possible to recognize a predisposition to squint, and to cultivate binocular vision by prescribing glasses and simple fusion exercises. If one eye has already become lazy it may be stimulated by applying atropine to the other. By increasing susceptibility to external affections, hypermetropia predisposes to the formation of superficial opacities, which impair vision more commonly than all the diseases of the deeper structures put together.

Myopia doubtless arises from strain imposed during education, but the process is cumulative—spread over successive generations. Consider the following case.

> A girl, aged 9, whose father and two sisters were short-sighted, complained on returning from school of having lost the sight of one eye. Both eyes were myopic and there was a retinal detachment in the left. After a period of rest the child was sent to live with relatives in the country, and received oral instruction only. Two years later the retina was completely reattached, but vision was permanently impaired.

What of the next generation? Surely their eyes should be kept under observation from infancy. Cataract in infancy is often a familial defect. In advanced cases the longer operation is postponed after the tenth month the greater the danger of permanent nystagmus. The severity of interstitial keratitis may be reduced by treatment, the need for which can often be recognized in infancy. Ophthalmic examination at any period may throw light on obscure disturbances of general health.

Eugenic intervention is impracticable; moreover, defects would continue to arise from the same causes as have operated in the past. When the late W. E. Forster, introducing compulsory education in the House of Commons, observed, "We must not forget that in trying to do good it is possible to do harm,"[1] he was concerned mainly with spiritual dangers, but his warning should also be applied to physical conditions. It is as important to provide a system of education whereby good vision may be protected as to provide special institutions to which those with bad vision may be relegated.

Ophthalmic examinations under a cycloplegic should be instituted in infancy and repeated at regular intervals; no defects would be found in the majority, but in the minority such conditions as would result in modifications of the normal curriculum and the cultivation and preservation of vision by various means, including prescription of glasses, medical treatment, or, in rare instances, surgical intervention.

Some effect may be expected in this generation, but it is only among our children's children that the full measure of success can be achieved. We ought not to abate our efforts on this account.—I am, etc.,

W. OLIVER LODGE.

Bradford, March 14th.

"ATOPHAN DERIVATIVES IN RHEUMATISM."

SIR,—Dr. W. Langdon Brown's letter in your issue of July 3rd (p. 37), calling attention to the toxicity of atophan derivatives, is of great importance. I very often prescribe these drugs, and always with caution, because of the slight or moderate toxic symptoms they not infrequently produce. But I have had three cases of severe poisoning going on to the development of jaundice, and in one case associated with repeated vomiting. These symptoms may arise in spite of the simultaneous administration of sodium bicarbonate, and they are not the result of large doses. In my experience they are sometimes due to a personal idiosyncrasy, for one of these patients developed the symptoms on two separate occasions, and on the second occasion after taking only one or at most two half-gram tablets. Another patient never took more than ten tablets in a week and developed the symptoms of hepatic disturbance after taking only thirty tablets. Further, in my experience no one preparation on the market is less likely than another to cause these toxic symptoms.—I am, etc.,

London, N.W.1, July 2nd. GEOFFREY EVANS.

SIR,—Dr. Langdon Brown, in your issue of July 3rd, rightly emphasizes the need for caution in the administration to patients of atophan derivatives. He mentions two fatal cases of toxic jaundice following the use of atoquinol. In the BRITISH MEDICAL JOURNAL (1923, i, p. 148) I recorded a case in which the ingestion of 7½ grains of atophan three times daily was followed by intense urticaria and subsequent jaundice. K. Schroeder had previously pointed out the liability of atophan derivatives to give rise to toxic symptoms, such as gastro-intestinal disturbance, urticaria, and albuminuria, but so far as I am aware jaundice had not been reported.—I am, etc.,

London, W.1, July 6th. C. WORSTER-DROUGHT, M.D.

*** We have received a communication from Messrs. Schering, Ltd., regarding Dr. Langdon Brown's reference to two fatal cases of toxic jaundice following the use of atoquinol. They state that atoquinol is not an atophan derivative, since atophan is a trade name applicable only to products emanating from the Schering Laboratories. They add that atophanyl is a solution of the sodium salts of phenylchinolin-carbonic acid combined with sodium salicylate, whereas atoquinol is described as allyl-phenyl-cinchonin ester; the two preparations, therefore, differ materially.

HISTORY OF MEDICINE.

SIR,—Your issue of June 26th (SUPPLEMENT, p. 244) contains notice of a motion by the Brighton Division to be made at the Annual Representative Meeting that the Council should be instructed to consider the desirability of instituting a Section on the History of Medicine at the Annual Meetings of the British Medical Association. The same project has presented itself as desirable to the Edinburgh and Leith Division, and this Division some time ago

[1] 3 Hansard, cxcix, 438.

Buchanan, President of the Glasgow Royal Faculty of Physicians and Surgeons, in moving the adoption of the report, said that the activity of this hospital was specially necessary in the atmosphere of Glasgow for the prevention of the serious disability which resulted from loss of hearing. He congratulated the directors and subscribers on the splendid new hospital they had provided, which made such a notable and valuable addition to the hospitals of the country.

ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW.

During the year ending December, 1925, the "record" number of 6,452 patients received treatment in the wards of the Royal Hospital for Sick Children, Glasgow, and an appeal by the directors for £75,000 to provide urgently necessary additions and extensions to the hospital was fully successful in less than six months. Completion of the extensions to the nurses' home, administrative offices, maids' quarters, and kitchen will enable further work to be begun, including the provision of departments for out-patients, orthopaedic work, and treatment by x rays and heliotherapy. The forty-third annual report of the hospital contains also the information that, in consequence of a generous gift, it will now be possible to extend the country branch of the hospital at Drumchapel. When this has been done the hospital and country branch will contain more than 400 cots, and will be one of the finest institutions of the kind for children in existence. Other gifts during the year include an electro-cardiograph, the equipment of a small dental department, various mercury and vapour arc lamps to form the nucleus of a heliotherapy department, a microphotographic apparatus for use in the laboratory, and a small x-ray apparatus in the operating theatre block. An appeal is made in the report for the endowment of a university lectureship and a research department in connexion with the pathology of the diseases of infancy and childhood, which would enable full advantage to be taken of the special resources of the hospital. Although the general income considerably increased during the year, there was a serious falling off in legacies, and the expenditure of the hospital exceeded the income by nearly £4,000. The contributions of employees in public works and warehouses showed an increase over the previous year of £360.

Correspondence.

REPORT ON RHEUMATIC HEART DISEASE IN CHILDREN.

SIR,—I am very unwilling to appear ungracious by offering any criticism of the report of a committee which voluntarily has undertaken the laborious and tiresome task of a statistical survey for the benefit of their less energetic colleagues; I venture to do so solely in the hope that while the data before the committee are still more or less in hand, one more piece of work may furnish something like a definite set of conclusions to their labours.

Those who daily are concerned with the question of tonsillar sepsis are, of necessity, alive to the fact that this is merely one element in oral sepsis; and they are compelled to feel that statistics of tonsillectomy which do not include at least the dental factor must be misleading.

In the case of the rheumatic subject who is most closely under my constant observation, a person devoid of tonsils, on three separate occasions, at long intervals, attacks of acute pain, swelling, and redness of the wrist have at once subsided, without other treatment, on the extraction of teeth from infected sockets. Such an experience is not exceptional.

Dr. Reginald Miller would be doing a great service if now, while he is in touch with his tonsillectomy cases, he would scrutinize their dental condition and history. In addition to the major problem, he possibly will find in the teeth an explanation of the interesting class incidence of rheumatism to which he alludes in his important contribution to the report on environmental and other predisposing causes of rheumatic infection.—I am, etc.,

Charing Cross Hospital, July 2nd. E. B. WAGGETT.

THE EPILEPSIES.

SIR,—Dr. Kinnier Wilson, in his lecture on the epilepsies (July 3rd, p. 1), refers to the evidence for and against the causal factor being anoxaemia due to temporary failure of cerebral circulation; he points out certain difficulties in the way of accepting this theory, although at present there is no better. It is significant that he records the occurrence of hallucinations resembling an aura in persons half-drowned, half-hanged, or half-suffocated. In all these conditions there is oxygen deficiency in the tissues.

Failure of the circulation and anoxaemia are only two of the many ways in which the processes of oxidation in the cell may be hindered; thus there may be a normal supply of oxygen in the arterial blood reaching the neighbourhood of the cell, and yet the cell may not be able to use it normally; this occurs in cyanide poisoning.

As a result of recent physiological experiments[1] dealing with tissue oxygen tension, tetany, and convulsions, I came to the conclusion that tetany and convulsions, however produced, were due to interference with oxidation in the nerve cell and that the violent contractions in tetany and convulsions were purposeful—that is, to increase the oxygen tension in the cells. I found that muscular contraction, however produced (for example, by exercise or by convulsions), caused a marked rise of oxygen tension in the tissues.

I would suggest tentatively that similar conditions exist in the epilepsies—that is, they are due to interference with cell oxidation processes—and that the violent muscular contractions represent an effort on the part of the body to remedy the defects.—I am, etc.,

London, N.W.3, July 3rd. J. ARGYLL CAMPBELL.

ELECTRICAL TREATMENT OF TIC-DOULOUREUX AND ANGINA.

SIR,—Dr. Turrell's success in the treatment of tic douloureux is confirmed by my own experience. I have treated with gratifying results several cases, the most striking being that of a lady, aged 50, who had suffered on and off for twenty years; during the last three years her complaint had grown steadily worse until her condition was pitiable. She came to me for treatment at the beginning of November, 1924. She was in almost constant pain, paroxysms being set up by almost any movement or attempts to masticate. Practically every treatment had been tried and surgical measures were suggested, but advised against by the surgeon consultant. I treated her with ionization, thrice weekly, for a month. From the commencement she began to respond and the attacks diminished in frequency and severity rapidly until at the end of twelve treatments she was quite free from pain. She remained free for two weeks, when she thought she felt mild signs of the pain returning, so she had six more treatments. Since then she has had no return of pain and is quite free in spite of the fact that all through last winter she went out in the coldest weather, which had not happened for years previously. Other cases have shown equally good results.

Dr. Basil Hughes appeals for a communication on the treatment of angina, and I am pleased to give my experience in these cases. Although I have had the opportunity of treating only six, the results have been so encouraging that I consider the treatment has great possibilities. These cases have been treated with diathermy—through the heart, placing one electrode over the precordial area, and the other on the back.

The first case was a man aged 64, with symptoms of two years' standing, increasing in severity and frequency until he came to me in May, 1924. At that time he was averaging eleven or twelve attacks a day. He was unable to lie down, but slept propped upright with pillows. He had consulted Dr. John Hey of Liverpool, who suggested that diathermy should be tried. He received three treatments a week for six weeks. After a fortnight's treatment he was much improved and could sleep lying down and walk better, and the attacks diminished until at the end of a month he only had occasional mild attacks. After six weeks' treatment his attacks had ceased. I saw him again in December, 1924, and he was still free from attacks and has remained so until recently, when I have lost sight of him. Up till then he was living the normal life of a man of his age.

[1] *Journ. Physiol.*, 1925. 60. 347.

Obituary.

JOHN THOMSON, M.D., F.R.C.P.ED. AND LOND., LL.D.,

Consulting Physician to the Royal Hospital for Sick Children, Edinburgh.

THE announcement of the death of Dr. John Thomson of Edinburgh has caused profound regret to a large number of friends and old pupils, for his qualities had endeared him to everyone with whom he came in contact. His health had been failing for over a year and he had been compelled considerably to curtail his usual activity. He died on July 2nd at his house in Edinburgh.

John Thomson was the son of Mr. Thomas Thomson, W.S., of Edinburgh, and was born in that city in 1856. He received his early education at the Edinburgh Academy, and then entered the University of Edinburgh, where he graduated M.B., C.M. in 1881. During the winter of 1881-82 he was resident to Professor Annandale, and in the following winter house-physician to Sir Thomas Fraser. He subsequently proceeded for a course of post-graduate study to Berlin and Vienna, and became senior resident in the Hospital for Sick Children, Great Ormond Street, London, which gave his mind a definite bent towards the study of children's diseases. In 1887 he became a Member of the Royal College of Physicians of Edinburgh, and was elected a Fellow in 1888. In 1891 he took the degree of M.D. of Edinburgh University, and at a subsequent date, on retiring from the post of clinical lecturer on diseases of children to the University, the honorary degree of LL.D. was conferred upon him. Dr. Thomson's eminence in the subject to which he had devoted his professional life was recognized by the Royal College of Physicians of London, who this year created him a Fellow under the special by-law which permits the election of persons not members of the College who, in the opinion of the Council, have distinguished themselves in any branch of the science or practice of medicine.

DR. JOHN THOMSON.
(Photograph by Swan Watson, Edinburgh.)

Dr. Thomson was a member of the Edinburgh and Leith Division of the British Medical Association. He had filled the offices of secretary, vice-president, and president respectively of the Section of Diseases of Children at the Annual Meetings of the Association in 1898 at Edinburgh, in 1900 at Ipswich, and in 1914 at Aberdeen.

His outstanding position as an authority on various aspects of diseases of childhood was recognized by his appointment to the staff of the Royal Hospital for Sick Children, Edinburgh, to which, on his retirement, he was made consulting physician, and to be university lecturer on the diseases of children. He was also consulting physician to the Royal National Institution for Mentally Defective Children at Larbert, and an honorary member of the American Pediatric Society.

His principal published work, to the composition of which he had brought an immense amount of thought and study, was the *Guide to the Clinical Study and Treatment of Sick Children*. This appeared first as a small textbook for practitioners and senior students in the year 1898, when much less attention was paid to this department of medicine than it receives at the present time. By 1908, a second edition was required, when the book had reached twice the size of the original volume, and when the third edition appeared in 1921 it had developed into a very comprehensive manual. The fourth edition was completed towards the end of 1925. Thomson was, before all things, a bedside student, and his book, the fourth edition of which was translated into French and Spanish, dealt mainly with those aspects of diseases which are peculiar to childhood or show characteristic differences when they occur in early life; it was a most valuable contribution to clinical medicine, partly because of the simplicity of its style and partly because it is a record of personal experience and close individual bedside study. Many other observations on subjects connected with diseases of children issued from his pen. One of his early works was a translation of Henoch's *Lectures on Children's Diseases*, for the New Sydenham Society. *Congenital Obliteration of the Bile Ducts*, a monograph which appeared in 1892, was a record of original observations which later came to be recognized as of great importance. His interest in the condition of mental defect in children was manifested by a clinic which he conducted for many years for children suffering from mental defect, and which was of very great value to the poorer classes of the community. Articles on infantilism, congenital stridor, and many other subjects were contributed to various medical journals and systems of medicine and of diseases of children, and each of these is of permanent value for the record of acute clinical observation that it contains.

Nothing, perhaps, better revealed John Thomson's character, his knowledge, and his sympathy, than the little book he wrote three years ago "for the mothers of babies who are long in learning to behave like other children of their age." He called it *Opening Doors*, and, as we said of it at the time, it was pervaded by that indefinable charm we find in a work of art and could scarcely hope to discover in a book of medical advice. Every line revealed his insight into the mother's feelings. He not only told her how to strive to open the doors of her child's mind, but gave her comfort and encouragement as well. Though the advice was couched in simple language, it was given by a man with a profound knowledge of children. He interested himself also in physical defects, and was one of the principal founders of the Edinburgh Crippled Children's Aid Society.

It is chiefly as a skilful practitioner, however, that Dr. Thomson's name and personality will live among those who came into personal contact with him. He was, all his life, a sedulous taker of notes on cases, and he has been frequently known, at meetings for medical discussion, to produce a volume of closely written notes bearing on some case under discussion, and to describe in detail the original cause of the malady as noted by him during the patient's childhood ten or twenty years previously. Every call upon his time and his professional skill was answered with care and punctuality. He always found ample time to give to those who needed his skill, whether the patient was rich or poor. In him great ability was combined with a devotion to the advancement of medical knowledge on its clinical side, and few have been more respected for their painstaking labours or held in greater affection by their patients than was Dr. John Thomson.

In 1887 Dr. Thomson had married Isabel MacPhail, daughter of the Rev. Mr. MacPhail of Benbecula, by whom he is survived, as well as by three sons, of whom one is a member of the medical profession, and by two daughters. A funeral service was held in St. Andrew's U.F. Church, Edinburgh, on Monday, July 5th, and the interment took place at the Dean Cemetery in the presence of a large gathering, at which the medical profession was largely represented.

In response to our request, Dr. G. F. STILL, physician to the Hospital for Sick Children, Great Ormond Street, and professor of diseases of children at King's College, has sent us the following tribute to Dr. Thomson's memory:

With the passing of John Thomson of Edinburgh, British medicine, and, indeed, medicine the world over, is the poorer. In the particular department of medicine he had

forwarded a recommendation expressing a desire that a Section on the History of Medicine should be formed for the meeting which is to take place at Edinburgh in July, 1927. It seems to be particularly appropriate that the Section should be initiated at the Edinburgh meeting, seeing that this medical school was, I believe, the first in Great Britain to provide for instruction of medical students in the history of their profession by instituting a lectureship on history of medicine in 1908. The fact that considerably over 1,000 students have attended this optional course at Edinburgh since its commencement is sufficient evidence of the increasing attention which this subject is now receiving in Great Britain. If other Divisions will follow the lead of Brighton and press for the formation of this Section it will no doubt come into being and prove a much appreciated feature of the Annual Meetings of the Association.—I am, etc.,

JOHN D. COMRIE,
Edinburgh, June 30th. Chairman, Edinburgh and Leith Division.

APPEALS FROM THE GENERAL MEDICAL COUNCIL.

SIR,—It is significant that two Divisions of the British Medical Association—Hastings and Bournemouth—have given notices of motion for the forthcoming Annual Representative Meeting relating to the right of appeal from disciplinary decisions of the General Medical Council.

It is hoped that this subject will receive due consideration by the Representative Body exclusively upon its merits, and entirely unprejudiced by any recent clamour of the lay press, or the public, or certain malcontents within the profession, however misinformed or well informed. The standard of professional ethics has always been jealously guarded by the General Medical Council, and rightly so—indeed, it may be granted at once that the Council exhibits a constant endeavour to perform its duties impartially and with every indication of care and good judgement.

Nevertheless the fact remains that, functioning as a domestic tribunal only, and as a court of first instance, from which no appeal lies, it is thus quite remote from modern conceptions of the administration of justice, which latter are characterized by the fullest protection for the claims of the accused.

Take, for example, those cases of alleged misconduct in which the General Medical Council directs an inquiry, although there is an absence of any outside complainant: here we have the anomalous position of the Council acting as prosecutor and judge, a condition of affairs certainly alien to British ideas of justice; and yet under existing conditions no higher court possesses any jurisdiction to interfere. In the legal profession a right of appeal lies to the barrister who has been disbarred, as also to the solicitor who has been struck off the roll; *a fortiori* the claim of the medical profession, for surely a medical tribunal can scarcely be considered so competent an authority as a legal in determining points of law, and the value of evidence, its relevancy, competency, admissibility, or weight. Such intricate and involved questions in the ordinary courts are the province of an experienced judge to determine and direct.

It is conceivable that the Council might periodically be tempted in its zeal to exceed the bounds of wisdom and justice in placing members' liabilities much beyond those of the general public, and the very existence of an appeal tribunal would certainly exert a salutary effect. The Court of Criminal Appeal, for example, was created in 1907, in order to confer the same rights in criminal as in civil offences, and it has amply vindicated and enhanced the soundness of this principle of appeal in cases of alleged miscarriage of justice in the lower court.

In the Memorandum of Evidence placed by the British Medical Association before the Royal Commission on National Health Insurance (vide BRITISH MEDICAL JOURNAL, SUPPLEMENT, February 28th, 1925, para. 40, clauses 3, 4, and 5) it is laid down with reference to conduct of practitioners detrimental to the service, or giving false certificates, that appeal to the courts should be possible, and, in the case of proposed removal from the service, a further right of appeal. With such a recent precedent embodying this principle in disciplinary procedures connected with national health insurance, the Council of the Association will only be acting consistently in demanding application of the same principle to decisions of the General Medical Council, especially since the penalty involved, of possible erasure from the *Register* altogether, is so much more severe.

After all, the practitioner we ought to safeguard is not the one persistently guilty of misconduct, but the honest man of integrity and good character, who has committed some foolish error of judgement perhaps, or offended unwittingly and unintentionally; the former will not in the least object to removal from the *Register*—indeed, he will probably enjoy being a free lance entirely, and certainly will not be likely to seek any appeal.

An excellent case might be presented for the Hastings motion (omitting the words "if and when"), which also suggests a general revision of the whole status, constitution, and disciplinary powers of the General Medical Council. But if the Representative Body is not disposed to support this at the moment, it should at least recommend the Bournemouth motion, which is concerned with the right of appeal only.—I am, etc.,

Bournemouth, July 3rd. WALTER ASTEN.

OBSTETRICS IN GENERAL PRACTICE.

SIR,—Professor J. M. Munro Kerr of Glasgow University, under guise of an address on preventive medicine as applied to obstetrics (June 12th, p. 977), launched what really amounted to an attack on the general practitioners of these islands. Among his audience were probably the sons and daughters of general practitioners, and for these young people to have to hear it said that their fathers sometimes conducted midwifery in houses where "every sense of decency is violated," and "whose hands are often imperfectly cleansed and who seldom wear rubber gloves," must, to say the least, have been disconcerting. Perhaps it is merely the professor's method of encouraging his students to wash their hands!

Professor Kerr said that: (1) "Puerperal infection can be prevented by special preparation of patient, surgeon, and nurses," yet, in the recent annual report of the Coombe Lying-in Hospital (see BRITISH MEDICAL JOURNAL, June 19th, p. 1059) the statement appears that among the cases of puerperal sepsis that occurred twenty-four of these had had no vaginal examination, no laceration of perineum, and no operative intervention whatsoever, and all of these, no doubt, had been suitably prepared.

(2) Cases of sepsis occurring in maternity hospitals are due to "autogenetic infection" (blessed words!) or to some prior infection. Might not the general practitioner, with equal justice, be allowed similar pleading when accused of causing sepsis?

(3) "Because a confinement upsets the rest of the work of a busy general practitioner he is inclined to hasten the delivery." I can assure Professor Kerr that if he and others like him had their way the general practitioner would soon cease to be busy, unless, indeed, filling up forms for the medical officer of health.

(4) Amongst "remedial measures" he advises "rubber gloves for midwives and nurses." This sounds childish, and one wonders how long these same rubber gloves would stay sterile in some of the back streets of our large cities, where mostly midwives work.

(5) Again (para. *h*), "It is little short of a disgrace that at the present day the student on graduation is unfitted for the practice of midwifery." Surely a libel on these young men and women who qualify from our medical schools.

In your review, Sir, of this lecture you strike the nail on the head when you suggest that an improvement in housing conditions is much more likely to lead to a diminution of puerperal morbidity, and so would say any man in touch with the realities of the situation.

It is a pity, though, that the utterances of professors should bring discredit—as they are certain to do—on a large body of hard-working men endeavouring to do their duty in difficult circumstances.—I am, etc.,

VINCENT P. NORMAN, M.D.Durh.,
Bradford, Yorks, June 28th. F.R.C.S.Ed.

to obtain proficiency in clinical medicine must study multitudes of cases, so that his judgement in diagnosis and prognosis may be sure. At the same time, the physician must keep abreast of the advances of medicine in all fields, and he must be ready to apply in his practice the results of laboratory investigation. The ideal Dr. Thomson cherished was constant study and endeavour to widen experience, and he would point out that too often men cover up their deficiency in real medicine by a display of kindness and consideration for their patients. This appearance of virtue he utterly condemned.

In his early years he was appointed on the staff of the New Town Dispensary. In that office he found the opportunity for clinical study which he desired. The clinic in diseases of children held by him drew patients in large numbers. Mere numbers, however, did not satisfy him, and his investigations carried him far into pathology and therapeutics as well as anatomy and physiology. He often recalled the time he had spent in the dispensary, and he seemed to regard this as the most fruitful period of his professional life. When wards in the Royal Hospital for Sick Children were put in his charge, his work in them was a continuation of what he had begun in the dispensary. His work in the district was a demonstration of scientific zeal and enterprise. While he was working on the treatment of diseases of the thyroid gland I had the good fortune to accompany him on his visits in the district, and can never forget this great investigation, carried out in circumstances which might have been held to make accurate observations impossible.

In this way he attacked many problems in medicine, and contributed to them all. He had a special interest in the subject of mental deficiency, and at the Children's Hospital he held for many years a clinic in the subject. To advance the knowledge of this very obscure branch of medicine was a very characteristic interest. His purpose was to study the conditions of failure in mental and bodily development in all its phases, and to give guidance to the mothers of the patients. He was a pioneer in this method of dealing with the subject, and he was the first to include in his care of these difficult patients the necessary instruction of the parents.

I have referred only to his professional work, but in the background of his life there were many other interests. He was an angler who had a sportsman's acquaintance with the streams and lochs of his native country. He was a reader of many kinds of books. At one time his interest led him into the study of old French poetry. Lately he attended with great enjoyment the meetings of the English Association, and to his intimate friends he would reveal a sensitive spirit of literary appreciation and criticism. He had, above all, broad sympathies. He was accessible to all, and the serious attention he gave to what was put before him would sometimes embarrass the careless advocate of an ill considered opinion. Every form of sincere human endeavour after truth, and the teaching of the past as well as the present, appealed to him. Nothing narrow in regard to religion, or literature, or any human activity found a place in his conception of life.

W. H. CLAYTON-GREENE, C.B.E., M.B., F.R.C.S.,

Formerly Surgeon and Lecturer on Surgery, St. Mary's Hospital.

As briefly announced in our last issue, the death of Mr. William Henry Clayton-Greene occurred on June 30th, at his home in Guernsey, whither he had retired nearly two years ago. He started his medical career at Cambridge, and having won an open scholarship to St. Mary's Hospital in 1898, took the M.R.C.S., L.R.C.P. in 1900, and the M.B., B.Chir.Cantab., and the F.R.C.S.Eng. in 1901. In the following year he was appointed surgical registrar to St. Mary's Hospital, and from then onwards he remained connected with it till the date of his retirement. He became surgeon to out-patients in 1905, and full surgeon in 1911. In addition, he was on the surgical staff of the French Hospital from 1903 to 1918, and of the Hampstead General Hospital from 1907 to 1910.

On the outbreak of war he joined the staff of Lord Tredegar's steam yacht *Liberty*, specially converted into a hospital ship; but it was soon seen that hospital ships with the fleet would have little value, and he returned to London. He was on the Admiralty emergency list of surgeons willing to go at short notice to any ports where large numbers of naval wounded were expected, and later, in 1915, joined the surgical staff of King George V Hospital, under Colonel (later Major-General Sir) Murray Irwin, A.M.S. Later, when the Great Central Hotel was converted into the Prince of Wales's Hospital for Officers, he was on the active surgical staff there. After the war he became consulting surgeon to the North Herts and South Bedfordshire Hospital, and honorary surgeon to the Radium Institute, in the activities of which he always took a keen and sympathetic interest.

In 1907 Mr. Clayton-Greene became dean of the Medical School of St. Mary's Hospital, and continued in that office for four years. He was an examiner in surgery for the Conjoint Board, the Universities of London and Cambridge, and an examiner in anatomy in the Primary Examination for the Fellowship of the Royal College of Surgeons. His best known writings include the editing of Pye's *Surgical Handicraft*, and the section on diseases of the tongue in Choyce's *System of Surgery*.

Mr. Clayton-Greene gained a great reputation both as a surgeon and as a teacher. As a surgeon he was a peculiarly acute observer of details, and thereby a good diagnostician; he possessed a brilliant technique, was quick, neat, and eminently safe and sure. Although he wrote little, and attended scientific meetings but rarely, his name was known widely outside London, and, indeed, abroad as well. As a teacher he was in the direct line following such great men as Edmund Owen and Herbert Paget, and it was not difficult to trace their influence on his methods. From his earliest days at St. Mary's he rapidly gained an ascendancy among students which he never lost. There will be many who will never forget their experiences when in that select band—"the front row"—nor incidentally will ever forget the things he taught them. His teaching was so direct, so forceful, so devoid of unnecessary or confusing description, that it remains with many of his students as clear to-day as when they heard it years ago. In 1921, when the system of clinical units was in its infancy, the authorities of St. Mary's Hospital started, on their own initiative, and without outside support, a medical and a surgical unit. Of the latter Mr. Clayton-Greene took charge for one probationary year, during which its success was emphatically demonstrated and his great gifts as a teacher given full opportunity.

To those who knew him intimately he revealed a charming personality, a loyalty which nothing could shake, and a devotion to little children which was probably the strongest—though the most unsuspected—thing about him. He certainly did not suffer fools gladly, and the lazy and the inefficient dresser was sent about his business in a manner which left him no illusions about the work during the period of his office. One of the strongest traits of his character was punctuality; he could always be relied upon to be just ahead of time, and so skilfully did he order his doings that even the uncertainties of surgical practice rarely made him deviate from his announced time. To serve him as a dresser, a house-surgeon, or as his assistant was the most stimulating experience, for he set himself such a high standard that it was almost impossible not to try in some small way to follow that standard also; and those who did so may have had a very strenuous time, but they enjoyed every moment of it.

During the latter part of the war he pricked his finger on a spicule of bone, while operating on a bad war wound. He went down with a terrible streptococcal infection, and in turn his life, his arm, his forearm, and his finger were despaired of. He saved them all. He suffered also from an unrecognized diphtheria, and had a transitory typical diphtheritic palsy. These experiences, in addition to very hard work, left their mark upon him. For many reasons he came to the conclusion in 1924 that he would prefer to retire. There can be little doubt that at the age of 49, with an already high position in the surgical world of this country, he had everything at his feet; and yet he preferred to go, preferred to retire when young enough to enjoy his possessions. He went to live in Guernsey, where,

taken for his own Thomson's influence was world-wide; his writings were known and read, not only in English-speaking countries, but in some of those parts of Europe where the work of British physicians often receives little attention. To the medical student of to-day Dr. John Thomson is probably best known as the writer of a book on disease in children, which, under the title *Guide to Clinical Study and Treatment of Sick Children*, appeared first in 1898, and, in much enlarged form, reached its fourth edition last year. Unique, however, as that book is in its excellence, it was not the source of Dr. Thomson's reputation. He was well known and already regarded as an authority upon disease in children before its appearance. His writings on congenital hypertrophy of the pylorus, and on pyelitis in infants, had drawn general attention to affections which, although previously described, were still unknown to most medical men. One of his earlier publications, in 1892, was a monograph on congenital obliteration of the bile ducts, a careful study, in which, as in all his writings, he showed a wide familiarity with the work of other observers in this country and abroad. He was greatly interested in mentally deficient children, and by his writings, accompanied as they usually were by admirable photographs, he did much to familiarize the profession with the appearances of mental defect in the infant. To those who knew Thomson his writings were the more valuable because of that unswerving truthfulness in statement which was one of his characteristics. In his speech, as in his writings, he was minutely accurate, and it was perhaps partly the constant effort at exact accuracy which gave a certain slowness and hesitancy to his speech at times.

In his later years there came increasing recognition of his services to the study of disease in children. He was made an honorary member of the American Pediatric Society, and also of the Canadian Society for the Study of Diseases of Children; the University of Edinburgh conferred the honorary degree of LL.D. upon him, and the Royal College of Physicians of London elected him a Fellow. But Thomson's ambitions were not for place or position, but for the service of others; for years it was his hope to write something that might be a help to the mothers of mentally defective babies in their task of training these children, and the outcome of his observations over many years was a little booklet called *Opening Doors*; it is worded with wonderful simplicity and in such a way as to avoid mention anywhere of mental deficiency, for fear lest the mother should be discouraged thereby. This was his last publication, and it was a great satisfaction to him when, some months ago, symptoms of serious illness began to threaten him, that he had accomplished his wish. Thomson's ideals were high. On one occasion, when some point of supposed difficulty had arisen as to the right course between two practitioners, Thomson, who was appealed to, replied that he did not think there was any real difficulty if the simple course were adopted of doing what one would wish done to oneself. This was the spirit of his life, and accounted for his lovableness. For lovable he was, and there was a gentleness with him which won the confidence of children. Alas! that he is gone from us; he will be missed indeed.

> "Farewell, kind heart! and if there be
> In that unshored immensity
> Child-angels, they will welcome thee."

We owe to Dr. LEONARD FINDLAY, Professor of Pediatrics in the University of Glasgow, the following estimate of Thomson's eminence as a clinical investigator and teacher:

Through the death of John Thomson medicine, and especially that branch which deals with the diseases of children, has lost one of her greatest ornaments. For many years he has kept alight the torch of British pediatrics, and has made Edinburgh a Mecca for all students in that field of medical science. His was a name that was known in all corners of the earth where diseases of children are studied. The offering of a personal tribute to John Thomson gives an opportunity for the opening of the floodgates of sorrow at the loss of one of the greatest influences in the life of the present writer.

To know and to possess the friendship of John Thomson was a great privilege. I well recall the first time that I met him. It was some fourteen years ago when, having heard that I purposed taking up the special study of diseases of children, he sought me out during the course of a medical meeting to give me good advice and words of encouragement. This was a most characteristic act on his part, for he was a true missionary, and was always searching for recruits for pediatrics. By his innate gentleness and charity and keen desire to help and encourage, he gathered around himself as the master all the younger workers as true and faithful disciples. He seemed specially fond of the young worker just as he was of the young patient. He had the gift of mingling praise and criticism in such a proportion as to get the best out of everybody. Quite recently he was in great part responsible for instituting a clinical club comprising those interested in pediatrics in Scotland, and though he was much the eldest of the members he was the mainstay and director of our energies. It is this great gift which Thomson had for associating with the younger generation which gives us some comfort at this time, since we know that his great influence will still live and be perpetuated.

Thomson was a true physician. Perhaps this aspect of his character was best exemplified in his work among mentally defective children, which during his later years was undoubtedly nearest his heart. Here he laboured for years developing educational methods for the betterment of these helpless patients and dispensing comfort and encouragement to their parents. I think that of all his work this was the part of which he was most proud, if one could ever speak of Thomson being proud about anything he had done. John Thomson, of course, was a great clinician, and at the bedside his acuity of vision and ripe experience were an inspiration. Though not a laboratory man himself, he appreciated the great help that might accrue from this side and never lost an opportunity of becoming acquainted first-hand with such work. He was a wonderfully keen observer, and had the faculty of correlating his clinical observations with phenomena in other branches of medical science.

Never was there a man who had a finer nature. His charity and humility made him the most beloved of men. Thomson never spoke ill of anyone, and no one, I am sure, has ever heard anyone speak ill of him. One could spend the whole evening in his company discussing many branches of medicine, and often those fields which he had made specially his own, and the work of others who held opinions diametrically opposed to his, without ever hearing from him anything but careful consideration of and praise for their efforts to solve a problem. Though he believed strongly in his own views, he was not infatuated with them, and always admitted the possibility of other explanations. He was of a most equable disposition, and never showed the least impatience while discussing views which quite apparently he could not believe to be true. It was from associations such as these that one learnt to appreciate the bigness of his heart and mind, and it is the memory of such associations which will bring home to his friends the great loss they have sustained.

We are indebted to Professor LORRAIN SMITH, Professor of Pathology in the University of Edinburgh, for the following tribute to his friend's memory:

In the death of Dr. John Thomson the Edinburgh Medical School has lost one of its leaders, a physician of high distinction, a teacher and colleague universally beloved, and a man who had supported and guided many movements for the betterment of the community.

His personality drew to him a band of workers in his own and neighbouring fields of medicine, some of them ripe in experience like himself, who were eager to hear his criticism of their work, many of them students and disciples anxious to follow the teaching he gave. He won the hearts of all, and each carried away something of his enthusiasm and insight.

Though he had wide interests he concentrated his energies on clinical medicine, and one of the great lessons of his teaching is to be learned from his method of work. He held that the clinical observer should above all seek opportunities for wide experience. The man who desires

Medical Notes in Parliament.

[FROM OUR PARLIAMENTARY CORRESPONDENT.]

THE House of Commons read the Boards of Guardians (Default) Bill a second time on July 5th by 341 to 124. The Minister of Health explained that the bill had been brought forward in consequence of the policy pursued by the West Ham Board of Guardians. He repeated that the Government intended to introduce next year a general measure for reform of the Poor Law system, whereby boards of guardians would be abolished and their functions transferred to other bodies. The bill provided that the Minister of Health, when convinced that a board of guardians had exceeded its functions, could supersede them by appointed persons. On the same date the House approved the continuance for another month of the Regulations made under the Emergency Powers Act. The Report stage of the Finance Bill was commenced on July 6th, and on the following day the House considered Supplementary Estimates for expenditure consequent upon the recent general strike and the coal stoppage.

On July 6th Dr. Edgar Collis, Talbot Professor of Preventive Medicine in the Welsh National Medical School, Cardiff, addressed the Health and Housing Committee of Unionist Members of Parliament at the House of Commons. Dr. Fremantle was in the chair. Professor Collis said the coal mines were the Cinderella of public health. Health provisions underground were not made by the Government, by local authorities, or by employers, nor was there a demand among the miners for such provisions. He himself had not given evidence before the Royal Commission about this aspect of the coal problem because he did not wish to bring health regulations in mines into a political controversy. The health conditions in the mines in South Wales and Lancashire were not so good as in those of Nottinghamshire and Derbyshire. Nowhere was there a supply of drinking water underground, nor such provision for obtaining and taking food as was found in factories. He thought it would be possible to arrange a system whereby food was sent down the shaft and a place arranged where men could eat it. From the ordinary point of view the life of the miner was specially healthy, but in deep pits, with temperatures above 70°, heavy work threw an enormous strain on him, and a man might lose 10 lb. weight in a single day. Dr. Collis doubted whether in these deeper pits an increase in working hours would mean increase in output. Much absenteeism in mines was due to diseases such as rheumatism, which might not keep a surface worker away from a factory, but which made work at the face dangerous for a man who could not move quickly. The miners also had their occupational diseases, such as "beat-elbow" and "beat-knee." He alluded to the fact that miners were never taught how to do their work. By the use of the metronome and motion study a more efficient rhythm had been obtained experimentally, and men who had been taught this had been found to be still using it months afterwards.

Coal Mines Bill.

In the course of the debates on the Coal Mines Bill some references were made to questions of health. Dr. Watts, speaking as a general practitioner who for twenty-five years had worked in an industrial and mining area of Lancashire, said that the miners' calling was the healthiest of occupations in the country—far healthier than the cotton trade; but he admitted that it was a dangerous occupation. Mr. Barr said that the returns of the Registrar-General of Births and Deaths did not support this, and Mr. Lee asked whether it was not true that only the healthiest men took up mining. Mr. Jenkins produced a miner's pay ticket which, he said, showed that the colliery doctor's payment was secured by the owners deducting the money from wages. Dr. Watts retorted that at the present time nothing could be taken from the pay of the miner in that way, because he was insured under the National Health Insurance Acts. Mr. Jenkins said that the payment of 8d. a week was in addition to that. Mr. Paling said that official returns of the Mines Department showed the number of fatal and other accidents occurring in the mines in each complete year before and after the introduction of the Eight Hours Act and the Seven Hours Act respectively, and the number of persons engaged in the mining industry during each such year. The average killed each year (after allowing for the three months off in 1921) in six years under the Seven Hours Act was 1,147. The figures were 1,407 under the Eight Hours Act, or 260 fatal accidents more per year under the Eight Hours Act than under the Seven Hours Act. Sir Arthur Steel Maitland (Minister for Labour) said that as far as the facts justified any inference of that sort, it was that always in the last hour of work there had been somewhat of an increase in the accident rate, but that increase, if anything, had been rather greater with a seven-hour day, possibly under greater pressure, than it had been with an eight-hour day. The only conclusion that could quite safely be drawn on the question of accidents was that year after year the accident rate had diminished, partly through care, partly through more appliances, partly through general overseeing. At the close of the debate Colonel Lane-Fox (Parliamentary Secretary, Mines Department) dealt with the figures about accidents which Mr. Paling had cited. He said that during the eight-hour period the figures were certainly higher, but the end of the eight-hour period coincided with the time when stone dusting came in, and there was a marked reduction in coal dust explosions. In the first period there were 150 deaths per annum from accidents due to explosions, but during the second period there were fewer than 20. That showed that a large proportion of the accidents were due to explosions and not to fatigue or the physical condition of the men.

The bill was read a third time by 332 to 147.

Bills.

The Report stage of the Bethlem Hospital Bill, which had come down from the House of Lords, was taken in the Commons on June 30th.

The Royal Assent was given on June 30th to the Criminal Justice Amendment Act, Imperial War Graves Endowment Fund Act, and to several Acts confirming hospital charity schemes.

On July 6th the House of Lords read the Mines Bill a second time by 176 to 17. In the preceding debate Lord Arnold said half the miners worked in seams 4 ft. or less in height, often in very high temperatures. He contended that the miner's occupation was very unhealthy.

Ventilation of Houses.—Replying, on July 1st, to Commander Kenworthy, who drew attention to the sanctioning of houses with no chimneys or adequate flue outlets from the bedrooms, Mr. Chamberlain said he could not agree that efficient ventilation must be provided by chimneys or flues. Model by-laws issued by the Ministry of Health provided that adequate means of ventilation should be provided for every habitable room.

Incidence of Venereal Diseases.—On July 5th the Minister of Health informed Dr. Vernon Davies that he was advised that the returns from the treatment centres indicated that there had been a considerable reduction during the past five years in the incidence of venereal diseases, and particularly of syphilis, among the civilian population. One of the objects of the centres was to render the patients non-infective with a view to preventing the spread of venereal diseases, and he was advised that this part of the work of the centres had contributed specially to the decline in the incidence of these diseases. The recorded mortality from syphilis, and other conditions due to syphilis, had fallen considerably since the institution of special measures for the treatment of venereal diseases.

Mental Defectives.—On July 5th Sir K. Wood, in reply to Sir C. Rawson, said that he had received representations from local authorities with regard to the increase of mental defectives in the country and the increasing cost of maintaining and extending institutional treatment, but the Minister of Health was not aware of evidence to indicate that the incidence of mental defect was increasing. Though the cost of maintaining and extending institutional treatment was heavy, the Minister could not accept the suggestion that it was usually either unsatisfactory or ineffective. The Mental Deficiency Act of 1913 already provided machinery by which defectives could be segregated or placed under guardianship or supervision. The absence of sufficient institutional accommodation was hampering the operation of the Act, and local authorities had been urged to make further provision.

Venereal Disease in the Navy.—On July 1st Mr. Davidson informed Dr. Vernon Davies that the incidence in the navy at home and abroad of syphilis and gonorrhœa during the years 1922, 1923, and 1924 (latest figures available) was as follows:

	Ratio per 1,000 sick daily.		
	1922.	1923.	1924.
Syphilis (first record)	0.70	0.56	0.53
„ (latest record)	1.16	1.02	0.84
Gonorrhœa (acute)	3.17	2.89	2.68
„ (sequelæ)	1.28	1.29	1.23

He regretted that no statistics were available of the number of cases in which preventive measures were adopted.

Invaliding from the Navy.—Mr. Bridgeman, on June 30th, replying to Major Hore-Belisha, who asked what procedure was followed in the case of men invalided from the navy who desired to question the decision of the medical officer, said that all representations made by the rating prior to the medical survey were carefully considered by the board of survey. These and any further representations made by him or on his behalf subsequent to the invaliding were carefully investigated by the medical authorities at the Admiralty, in conjunction with the rating's medical history and with reference to conditions of his service. Any medical report which might be the basis of the complaint was referred to and taken as evidence, subject to further investigations or other evidence.

Substitution of Margarine for Butter.—Sir Kingsley Wood, on June 30th, in reply to Mr. Lansbury, who asked if the Minister of Health had consulted his medical advisers before recommending the West Ham Guardians to substitute margarine for butter in the dietaries prescribed for patients in the institution at Whipps Cross, said that the Minister had not recommended the West Ham guardians to make the substitution suggested. The dietary of this institution was supervised by the medical officer of the institution. With regard to the dietetic value of margarine Sir K. Wood referred to the special report on "Diet in relation to normal nutrition," issued by the Ministry in 1921.

in lovely surroundings, he made surgery his hobby and his recreation in life, and did just enough to maintain his interest. His illness was of less than a week's duration, and at the early age of 51 he passed peacefully away.

R. M. H.-J.

We are indebted to another friend and former colleague for the following personal appreciation:

The sudden death of Mr. Clayton-Greene has come as a great shock to a large circle of friends, both in the medical profession and among the general public. No rumour of his illness had reached us from Guernsey, and the paragraphs appearing in only one or two morning papers on July 3rd were all the more stunning because they found his friends quite unprepared. Less than two years ago he surprised us all by giving up prospects which, to a man with ordinary ambitions, must have seemed the brightest; but "Clayton" was never a man with ordinary ambitions, and it was a real desire for quietness and leisure that took him away from the turmoil of London to the peace of Guernsey.

It is nearly thirty years since I first met Clayton-Greene, and every year our friendship has only served to deepen and confirm my first impressions of him. One could not be with him for more than a very short time without realizing that one had to deal with a man of very marked individuality and of more than average ability. Others can speak of his technical skill as a surgeon, of his wonderful teaching powers, of his intimate and detailed knowledge of everything which bore on the science of his profession. Only to those who lived with him was it given to know what anxious thought he gave all the time to every case under his care, and how much of his life he gave to his patients. To be house-surgeon to Clayton-Greene was the ambition of every first-class student, and no better training in efficient workmanship could be found. True, he did not suffer fools gladly, and he was unsparing in his condemnation of any slackness or inefficiency which in any way endangered the success of an operation or militated against the comfort of a patient.

There have been great surgeons who have been able to put completely out of their minds any case except when it was immediately before them, who, when they have done all that their skill can do, can go away with an easy mind. Others equally great seem to have their cases always before their eyes and always in their minds, and it was to this second class that Clayton-Greene belonged. As his fame grew he began to get an unduly large proportion of cases of great severity, and there is little doubt that the strain of dealing with these cases was the main cause of his giving up his surgical practice in London.

In little things he could be brusque and offhand in manner, but in the more serious matters of life he had a depth and sincerity of feeling that, once experienced, formed an unbreakable bond of friendship and love. Few men have more deeply impressed themselves on their generation, and seldom has a man been so much missed as "Clayton" has been at St. Mary's. It is some consolation to know that his two years at Guernsey have been years of happiness, to know that he never regretted giving up, and to know how greatly he was loved and esteemed in the island. To his widow and children we offer our deepest sympathy in their great loss, and the knowledge that his memory will be held dear by the many colleagues, students, patients, and friends who owed so much to him and loved him so well.

JOHN MUNRO MOIR, M.D., V.D.,

Inverness.

THE death took place at his residence in Inverness, on June 29th, of Dr. John Munro Moir, one of the oldest and most respected practitioners in the North of Scotland. Dr. Moir had been ailing for some time, but had until recently been able to do a considerable portion of his usual work. He studied in Aberdeen, taking the degrees of M.B., C.M. there in 1876, and proceeding to the degree of M.D. in 1878. He settled in practice in Inverness early in life, and became one of the leading practitioners in that city and throughout the North of Scotland.

Despite a very busy life in medical practice, his interests were wide, and he had found leisure for many other social activities. For a time he acted as a member of the Inverness Town Council, and he took a very intimate and active interest in the work of the British Medical Association. Dr. Moir had been a member of the Association for almost fifty years, having been elected in 1878. For a number of years he acted as honorary secretary and treasurer of the Northern Counties of Scotland Branch, and the esteem in which his work for the Association was held by his fellow members was evidenced by his election as president of this Branch in 1898, an honour which was again conferred upon him in the year 1924-25. He was elected chairman of the Inverness Division in 1914, and held this post through the years of the war till 1919. His outstanding position in one of the departments of medicine to which he had paid particular attention was recognized by his election as vice-president of the Section of Medical Sociology at the Annual Meeting of the Association held in 1914 at Aberdeen. In addition to his interest in the local work of the Association, Dr. Moir played a considerable part in its central organization. Thus, he acted as representative of the Northern Counties of Scotland Branch between the years 1904 and 1907, and again from 1913 to 1918. During a great part of this time he was also a member of the Council of the Association, acting in this capacity from 1907-8 to 1910-11, and again from 1912-13 to 1917-18. The committees of the Association on which he served included the Organization, Journal, and Medico-Political Committees, and at the time of his death he had been for some years a member of the Scottish Committee. Dr. Moir was consulting surgeon to the Northern Infirmary at Inverness, honorary physician to the Northern Counties Institute for the Blind, and a medical referee under the Workmen's Compensation Act. For many years he had taken an active interest in volunteering, and held the Volunteer Decoration. On the formation of the Territorial Force his activities were transferred to this organization, and he ultimately attained the rank of lieutenant-colonel in the Territorial R.A.M.C. During the war he rendered valuable services in connexion with the work of the depot of the Cameron Highlanders at Inverness.

He will be much missed in the North of Scotland, where he was greatly respected as an energetic, unassuming, and skilful practitioner, and where his work in connexion with the organization of the medical profession was highly appreciated by his fellows.

We regret to record the sudden death, on June 20th, at his residence in Worthing, of Dr. ALLAN GORDON RUSSELL CAMERON. He was born in 1868, and was the son of Mr. Donald C. Cameron of Wakenaam, British Guiana. He received his early education at University College School, and was afterwards a student at St. Mary's Hospital. He obtained the diplomas of M.R.C.S., L.R.C.P. in 1891, and in the following year graduated M.B., B.S. at Durham University; in 1895 he took the D.P.H. of Cambridge. In 1896 he was appointed to the infectious hospitals service of the Metropolitan Asylums Board, and in 1901 was instructed by the board to make a special investigation into the subject of "return" cases of scarlet fever and diphtheria. On this important and difficult question he submitted a very valuable report, and as a result certain recommendations with a view to the attainment of a higher standard of efficiency in protecting the public from infection were made by the medical superintendents and adopted by the board. During his service under the board Dr. Cameron was granted leave for service in India in connexion with plague administration, for which he received the special thanks of the Government. In 1905 he was appointed county medical officer of health for West Sussex and chief school medical officer to the West Sussex Education Committee. In 1913 he became deputy medical officer of health and chief tuberculosis officer for the county of Durham, and held these appointments until his retirement in 1923 on account of ill health. Dr. Cameron took a prominent part in the work of the Society of Medical Officers of Health, and was an ex-president of the Northern and Southern Branches. His death will be deeply felt by his many friends, who held him in high regard for his exceptional qualities both of mind and character.

Medical News.

A CONGRESS of chemists has been arranged by the Society of Chemical Industry in connexion with its own forty-fifth annual meeting. The congress, which will be held in London, will open on Monday, July 19th, and continue until Friday, July 23rd. A joint meeting of the Biochemical Society with the London Section of the Society of Chemical Industry, to be held at the Hotel Great Central on Tuesday, July 20th, will be devoted to a discussion on hormones; it will be opened at 11 a.m. by Dr. H. H. Dale, F.R.S., with a paper on the experimental study and use of hormones. He will be followed by Dr. H. W. Dudley, who will deal with the chemistry of the pituitary gland and of insulin; by Mr. F. H. Carr, who will discuss the commercial production of hormones; by Dr. H. A. D. Jowett, who will speak on the history of adrenaline; by Professor G. Barger, F.R.S., whose subject will be recent progress in the chemistry of thyroxine; and by Dr. J. W. Trevan, who will explain the biological assay of hormones.

Nature states that at an extraordinary general assembly of the International Research Council on June 29th the Executive Committee agreed to omit from the statutes words which have limited membership to allies and neutrals. On the motion of the president of the Royal Society a resolution was unanimously adopted deciding to invite Germany, Austria, Hungary, and Bulgaria to join the International Research Council, and the unions attached to it.

DR. R. M. COURTAULD, a Cambridge medical graduate, has given an endowment to Pembroke College for the purpose of establishing a studentship in physics and cognate subjects. The student appointed will be called the "Stokes student," in memory of Sir George Gabriel Stokes, formerly Master of the College. No distinction of sex will be made in awarding the studentship, but if a man is appointed he will be required to become a member of the college. Preference will be given to graduates of the university. Candidates must be between the ages of 23 and 30, and must have shown capacity for research in mathematical or experimental physics, or in cognate subjects. The student will be expected to devote himself to research in Cambridge unless permitted for a limited time to conduct his researches elsewhere; he may give a course of lectures each term. The value of the studentship will be between £400 and £450 a year, and the tenure will be for three years, with possible renewal for a further five years.

FROM January 3rd to February 20th 2,369 fatal cases of plague occurred in the Dutch Indies.

THE annual general meeting of Fellows of the Royal Society of Medicine was held in the Barnes Hall, 1, Wimpole Street, on July 1st. The President, Sir StClair Thomson, in introducing the annual report of the Council, drew attention to some of the outstanding events of the session, more especially the important developments in regard to the library. Dr. R. H. Cole expressed the gratitude of the Society to Sir StClair Thomson for his gift of a presidential chain and badge of office, and a warm vote of thanks to the outgoing president for his generous services was carried on the proposal of Dr. Robert Hutchison and Mr. Walter Spencer. The president for the ensuing year, Sir James Berry, and the other officers were declared duly elected. The Council of the Society has awarded the William Gibson Research Scholarship to Miss Alice Bloomfield, who will hold it for two years.

THE North-East London Post-Graduate College is holding at the Prince of Wales's General hospital, Tottenham, N.15, a special vacation course from July 19th to 31st. It will include as on previous occasions practical demonstrations of clinical and "side-room" methods each morning from 10.30 to 12.45, demonstration of groups of selected illustrative cases from 2 to 2.45 p.m., general hospital work, in-patient and out-patient clinics, operations, demonstrations in the special departments of the hospital, and at 4.30 p.m. each day a clinical lecture, the opening lecture of the first week being by Dr. T. Watts Eden on ante-natal care as it affects the child *in utero*, and that of the second week at 3 p.m. by Lieut.-Colonel L. W. Harrison on the diagnosis and treatment of syphilis, to be illustrated by cinematograph films. On the Saturday morning at 11 there will be demonstrations of cases illustrating the diagnosis and treatment of the infectious fevers, at the North-Eastern Fever Hospital, St. Ann's Road, N., and of typical cases of mental disease at the Colney Hatch Mental Hospital, New Southgate, N. Luncheon will be obtainable in the neighbourhood of the hospital, and tea will be provided in the hospital each day at 4 p.m. The fee for the course is 5 guineas, or 3 guineas for either week. The names of those wishing to attend should be sent (by Friday, July 16th, if possible) to the Dean of the College or to the Secretary of the Fellowship of Medicine, at 1, Wimpole Street. W.1.

A MEETING of the Biochemical Society will be held this day (Saturday) at Oxford beginning at 2.30 p.m. Two demonstrations will be given and a number of papers will be read.

THE Fellowship of Medicine has arranged a clinical demonstration in surgery by Mr. Rocyn Jones at the Royal National Orthopaedic Hospital, on July 12th at 2 p.m., and one in ophthalmology at the Royal Eye Hospital on July 14th at 3 p.m. by Mr. Griffith; both demonstrations are open to medical practitioners without fee. A late afternoon course will be held at the West End Hospital for Nervous Diseases from July 19th to August 12th. Practical courses in obstetrics and child welfare have been arranged at the City of London Maternity Hospital; the duration of each course is one week. Practical courses in anaesthetics can be arranged. From August 9th to 14th there will be an intensive course at the Brompton Hospital; an all-day course in diseases of children at the Queen's Hospital from August 16th to 28th; and an all-day course at Queen Mary's Hospital in medicine, surgery, and the specialties from August 23rd to September 4th. Copies of all syllabuses may be had from the Secretary of the Fellowship of Medicine, 1, Wimpole Street, W.1.

THE annual dinner of past and present students of St. Mary's Hospital Medical School will be held at the Connaught Rooms, Great Queen Street, London, W.C., on Monday, October 4th, at 7.30 p.m.

A COMPLIMENTARY dinner was given to the president of the London and Counties Medical Protection Society, Sir John Rose Bradford, K.C.M.G., M.D., F.R.S., on June 29th at the Grand Hotel to celebrate his recent election to the presidency of the Royal College of Physicians of London. Dr. C. M. Fegen, chairman of council, occupied the chair and was supported by the vice-presidents and members of council, including the legal officers of the society.

AT the general meeting of the People's League of Health, on July 5th, the Lord Mayor announced that the King and the Prince of Wales were subscribers to the £100,000 endowment fund which the league was endeavouring to obtain. Lord Burnham, speaking on the general work of the league, emphasized the importance of co-operation between the various nations in matters relating to health in order that higher standards of humanity might be secured. Professor Edgar Collis, Dr. A. F. Tredgold, and Professor W. E. Dixon dealt with the aims and objects of the league from the physiological, psychological, and public health aspects. Resolutions were passed in favour of the provision of periodical medical and dental examinations for insured persons, and advocating an inquiry by the Government into the influence of the dole on the national health and character.

IN our issue of June 12th we announced that the Manson medal of the Royal Society of Tropical Medicine and Hygiene had been awarded to Professor Ettore Marchiafava of Rome. The formal presentation was made at the meeting of the society on June 17th by its president, Dr. Andrew Balfour. The Italian Ambassador and Baron San Severino also spoke on this occasion.

EIGHT deaths from puerperal septicaemia having occurred during the first six months of this year among patients attended by nurses on the staff of the Kingston District Nursing Association, questions were asked in Parliament, as mentioned in our issues of June 19th (p. 1069) and July 3rd (p. 40). The Minister of Health has now written to the chairman of the Kingston Association expressing his concern and sympathy with the relatives and friends of those who died, and stating that the inquiry by one of the medical officers of the Ministry indicated the existence of grave laxity on the part of the superintendent in the administration of the nursing home and of the midwifery practice. The same nurse had access to infected and non-infected patients, and a nurse suffering from septic infection had remained on duty in spite of her manifest unfitness to continue in attendance on maternity patients. The Minister thinks there can be little doubt that this nurse acted as a carrier of virulent infection, and that both she and the superintendent cannot be exonerated from blame. He adds that he cannot escape the impression that the medical care in more than one case did not seem, so far as the evidence shows, to have been in accordance with the principles of sound midwifery practice. He expresses approval of the action taken by the Kingston Association in closing the maternity home temporarily and suspending the district midwifery practice, and he suggests that when maternity work is resumed the superintendent and the nurse concerned should be replaced by others and that an entirely new midwifery staff should be appointed. The Minister refers to the long record of good and successful work by the association and is sure that its valuable public service will not be allowed to lapse. He suggests that it might be advisable for the committee to consider affiliating its association to the Surrey County Nursing Association.

Areas affected by the Coal Strike.—On July 1st the Minister of Health stated, in reply to Sir H. Brittain, that he was keeping in constant touch, through his general inspectors, with the areas affected by the coal stoppage. In reporting to him they had, at his request, paid special attention to the condition of the children. A large amount of assistance was being given by the supply of meals and other food, and there was no evidence of malnutrition of children.

Invaliding in the Air Force.—On July 1st Sir P. Sassoon informed Major Hore-Belisha that when an airman was dissatisfied with the decision of a board of medical officers (normally three) that his disability was not directly attributable to service, and appealed to the Air Ministry, he was asked to furnish the grounds of his appeal if not already given in his letter, and in particular any evidence additional to that considered by the board. On receipt of the information the decision of the invaliding board was reviewed in the light of all the facts and of any further evidence available, and if the case appeared to warrant it a further board would be held.

Notes in Brief.

Mr. Neville Chamberlain stated that a veterinary qualification, though desirable, is not essential for the examination of imported meat from the public health point of view.

The new Milk and Dairies Order will come into operation on October 1st. Its terms have been settled, and copies should be available in the course of a week or so.

On July 6th Dr. Haden Guest introduced a bill to provide for minimum rates of wages and hours of labour in industries protected from foreign competition, and it was read a first time.

The death rate per 1,000 among all labour, surface and underground, in the gold mines in the Gold Coast is approximately 8.3. No reliable figures are available as to the sickness rates.

The Committee considering the liquor control system in the Carlisle area is still taking evidence, but may consider its report in the autumn.

Universities and Colleges.

UNIVERSITY OF OXFORD.

AT a congregation held on July 3rd the following medical degrees were conferred:

D.M.—W. V. Robinson, H. S. Souttar.

M CH.—H. A. R. Whitelocke.

B.M.—T. H. Sellors, R. W. A. Simmons, D. Lurie, G. H. Crisp, A. V. Clemmey, K. A. Hamilton, F. J. Sale, C. R. Croft, G. P. Thorold, H. E. Cuthbert, W. R. Wood, O. R. Tisdall, Rosa S. Wordsworth, Margaret N. Jackson, Constance I. Pattullo.

UNIVERSITY OF CAMBRIDGE.

THE following candidates have been approved at the examinations indicated:

M.CHIR.—T. M. Thomas

M.B., B.CHIR. (*Part I, Surgery, Midwifery, and Gynaecology*).—J. R. Armstrong, B. Blaxill, R. D. W. Butler, G. D. G. Cameron, H. M. Elliott, R. W. B. Ellis, T. L. Evans, R. M. Gilchrist, E. J. Greenwood, G. J. Gross, M. J. Harker, L. J. Haydon, A. J. Johnson, F. W. Law, D. F. Lawson, R. Marnham, R. W. L. May, E. D. Moir, J. W. Monro, J. Morris, C. G. E. Plumstead, G. F. Taylor, R. J. Vince, F. H. A. Walker, V. B. Wigglesworth, R. W. Windle, D. S. Tait (Girton). (*Part II, Principles and Practice of Physic, Pathology, and Pharmacology*): B. E. Ahrens, G. L. Alexander, J. O. W. Bland, C. K. Colwill, W. F. Cooper, R. K. Debenham, T. S. Dewey, H. V. Dicks, J. Dockray, A. B. Eddowes, J. R. Ellison, T. F. Fox, H. F. Griffiths, J. H. Hannan, H. J. Heathcote, G. G. Holmes, L. A. Jackson, D. McI. Johnson, S. Levy-Simpson, W. W. McLean, R. H. Metcalf, R. D. Milford, H. P. Nelson, H. W. Nicholson, F. B. Parsons, W. Richards, L. A. Richardson, F. W. Roques, K. G. Salmon, G. Simon, R. E. Smith, A. W. Spence, R. S. Starkey, B. C. Tate, H. B. Trumper, V. B. Wigglesworth, J. G. Wigley, H. L. Wilson, F. G. Winterton, A. T. Worthington, H. R. Youngman.

UNIVERSITY OF LIVERPOOL.

THE following candidates have been approved at the examinations indicated:

M.D.—R. G. Cooke, C. W. Healey.

M.B., CH.B.—[1 3 5]R. G. Walmsley, [2 4]R. M. Ainsworth, [2 5]J. F. Galloway, [2 3]F. Murgatroyd. (*Part III*): Grace A. Austin, B. Brickman, G. E. Church, J. L. Clegg, D. Cohen, R. F. Corlett, J. C. Edwards, Elinor M. Gelling, E. H. Glynn, A. J. Goss, Dorothy H. Gough, J. Halton, D. G. Henry, R. S. Jarvis, T. A. Jermy, A. N. Jones, C. Kaufman, G. T. Krajewski, J. S. Logan, D. B. Macaulay, W. A. McCurdy, J. C. McFarland, G. McLoughlin, J. Morgan, G. W. Paton, H. E. Pearson, Mary T. Penrice, D. E. P. Pritchard, A. V. Russell, M. R. Sheridan, Mary A. Silcock, N. P. Slade, I. Thomas, G. D. Thompson, J. E. Wallace, Kathleen M. Ward, A. K. Wilson, Nora M. Wilson. (*Part I*): J. G. Hattingh, R. E. Jackson, G. W. Phillips, J. Williamson. (*Part II*): S. W. Adler, A. B. Anderson, T. Blezard, [6]W. S. Brindle, H. C. Calvey, A. N. Cameron, [6 7]J. K. Cameron, S. Canter, E. Cohen, F. R. Craddock, W. S. Creer, A. Dala, A. Dodd, T. L. Dowell, W. J. Eastwood, Lilian W. Edwards, Ruth M. Fennell, J. J. Graham, Elsie A. Griffiths, G. T. Harris, [6]E. D. Irvine, K. Jilani, R. N. Johnson, O. V. Jones, I. Kossew, [6 7]T. Lasker, Theresa J. Lee, J. L. Lewis, F. E. Lomas, J. McHugh, T. C. Newman, J. Pasvolsky, J. W. Pickup, E. E. Prebble, C. Rigby, N. W. Riley, G. L. Roberts, J. B. Rushton, [7]M. Silverstone, V. J. M. Taylor, J. P. Thomas, S. L. Tunnicliffe, A. J. Walsh, E. N. Wardle, P. H. Whitaker, A. L. Williams, R. L. Wynne.

D.P.H.—W. E. Haigh, J. E. Power, J. A. Scott, A. E. Wall.

DIPLOMA IN TROPICAL HYGIENE.—W. J. Aitken, N. Bligh-Peacock, T. Cullen, E. G. A. Don, H. P. Fowler, D. Lennox, A. G. Mackay, F. Oppenheimer, S. A. Talib, N. S. Turnbull.

[1] First-class honours.
[2] Second-class honours.
[3] Distinction in medicine.
[4] Distinction in surgery.
[5] Distinction in midwifery.
[6] Distinction in public health.
[7] Distinction in forensic medicine and toxicology.

UNIVERSITY OF BIRMINGHAM.

DR. LAURENCE BALL, assistant to the chair of medicine and physician to Queen's Hospital, has been appointed to be joint Professor of Medicine. Professor Leonard Gamgee, M.S., F.R.C.S., has been elected the representative of the University on the General Medical Council, in succession to Sir Gilbert Barling, Bt., resigned.

At a congregation held on July 3rd the following medical degrees were conferred:

M.D.—Gladys M. Evans, V. G. Williams.

M.B., CH.B.—Marjorie E. Crump, A. F. Downie, Margaret L. A. Galbraith, L. Glass, J. G. Green, Joan E. Greener, G. S. Hall, D. Humphreys, Roberta I. Hutchinson, Marie E. Jackson, A. J. Lea, J. H. Marshall, C. A. Mather, B. L. S. Murtagh, A. V. Neale, H. S. H. O'Conor, Dorothy E. A. Reader, N. S. Robinson, G. de N. U. Somers, W. Summers, P. Symons, A. C. R. Walton, J. D. H. Wearing, Nellie Wilkes.

UNIVERSITY OF LEEDS.

AT a congregation of the University held on July 3rd the Vice-Chancellor conferred the following degrees:

M.D.—A. L. Taylor (with distinction), D. R. Allison, P. Rosenbloom.

CH.M.—G. Armitage.

M.B., CH.B.—*F. K. Beaumont, *W. D. Bedford, *S. Jack, *Hartfall, A. Barratt, W. H. Carr, J. E. Erdheim, D. Heap, Eugenie C. Illingworth, G. J. Jenkinson, Emily E. Johnson, A. Katz, F. Lawson, Beatrice M. Leetham, R. A. Lilliott, N. Newman, L. B. Pawson, M. Perlman, M. S. Scott, S. Silverman, J. E. Teal, A. C. Welch, J. V. Whitaker, E. W. L. White.

* With second-class honours.

UNIVERSITY OF DUBLIN.

AT the later summer commencements in Trinity term held on June 29th the following were among the degrees conferred:

M CH. (*honoris causa*).—Sir Berkeley G. A. Moynihan.

M.D.—F. J. O'Meara, W. B. J. Pemberton, G. F. T. Saunders, A. H. Thompson, R. B. Jackson, W. J. Powell.

M.B., B.CH., B.A.O.—G. T. L. Archer, Henrietta Armstrong, D. Bluett, H. A. Brittain, H. O. Clarke (B.Ch. *stip. cond.*), Evelyn E. Connolly, J. Craig, G. E. Dodds, G. S. Gardner, G. V. A. Griffith, R. E. Hadden, E. H. Hall, G. R. L. Jordan, T. J. W. Keown, Nancie N. Lowther, J. G. M'Dowell, D. St.C. Mackenzie, J. F. M'Mahon, Isabella K. M'Neilly, E. E. Malone, R. H. Mitchell, C. G. Nel, H. Nelson, H. M. Nevin, Kathleen I. Purdy, M. A. W. Roberts, E. E. Satchwell, S. Smyth, R. T. P. Tweedy, C. H. Wilson, T. F. M. M. Woods.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION TO THE COUNCIL.

AT a meeting of the Fellows on July 1st four Fellows were elected into the Council to fill the vacancies occasioned by the resignation of Mr. James Sherren, C.B.E., and Sir Charles Ballance, K.C.M.G., C.B., and by the retirement in rotation of Mr. Walter G. Spencer and Mr. Ernest W. Hey Groves. The result of the poll was as follows:

	Votes.	Plumpers.
ERNEST WILLIAM HEY GROVES	532	2
GEORGE GREY TURNER	426	3
VINCENT WARREN LOW, C.B.	398	38
VICTOR BONNEY	361	8
Hugh Lett, C.B.E.	306	27
John Percy Lockhart-Mummery	270	11
William Ernest Miles	264	10
Charles Coley Choyce, C.M.G., C.B.E. ...	259	1
Herbert John Paterson, C.B.E.	222	5
Sir Herbert Furnivall Waterhouse... ...	221	5
Philip Turner	181	18
Cyril Alfred Rankin Nitch	172	4

In all, 1,100 Fellows voted (including 184 Fellows resident out of the United Kingdom), 1,036 sending their ballot papers through the post and 4 voting in person. In addition, 2 voting papers were found to be invalid. Mr. Low becomes substitute Member of Council for Mr. Sherren until July, 1933, and Mr. Bonney becomes substitute Member of Council for Sir Charles Ballance until July, 1930.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT the monthly business meeting of the College held on July 2nd the following candidates, having passed the Final Qualifying Examinations under the conjoint scheme of the Irish Royal Colleges of Physicians and Surgeons, were duly admitted to the Licences in Medicine and Midwifery of the College:

Sybil Atkinson, Henrietta Carson, J. J. Fant, J. E. Harris, J. A. Hynes, P. Kennedy, W. Kingsberg, J. Molony, L. P. F. Nolan, W. O'Connor, J. O'Neill, T. S. Osborne, J. Owens, Catherine A. Quinn, C. Whitehead.

At the same meeting a letter was read from the secretary of the Committee of Management stating that P. Moran and N. K. Henderson had passed the examination for the Diploma in Psychological Medicine.

A letter was also read from the secretary of the Executive Council, Saorstát Eireann, forwarding a copy of a draft Order which has been prepared for the purpose of adapting the charters of the College in accordance with Section 1 of the Adaptation of Charters Act, 1926, and asking if the College has any observations to make thereon.

The College unanimously approved the draft Order.